

INTERNATIONAL JOINT COMMISSION

HEARING AND ARGUMENT

IN THE MATTER OF THE

MEASUREMENT AND APPORTIONMENT OF THE
WATERS OF THE ST. MARY AND MILK
RIVERS AND THEIR TRIBUTARIES

IN THE

UNITED STATES AND CANADA

Under Article VI of the treaty of
January 11, 1909, between the
United States and Great Britain

ST. PAUL, MINN., MAY 24 TO 28, 1915



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INTERNATIONAL JOINT COMMISSION.

CANADA.

CHARLES A. MAGRATH, CHAIRMAN.
HENRY A. POWELL, K. C.
P. B. MIGNAULT, K. C.

LAWRENCE J. BURPEE, *Secretary.*

UNITED STATES.

OBADIAH GARDNER, CHAIRMAN.
JAMES A. TAWNEY.
R. B. GLENN.

WHITEHEAD KLUTTZ, *Secretary.*

MEASUREMENT AND APPORTIONMENT OF THE WATERS OF THE ST. MARY AND MILK RIVERS.

INTERNATIONAL JOINT COMMISSION,
St. Paul, Minn., Monday, May 24, 1915.

The International Joint Commission, pursuant to public notice, met in the Federal Building at St. Paul, Minn., at 10 o'clock a. m., Monday, May 24, 1915, for the purpose of considering Article VI of the treaty of January 11, 1909, between the United States and Great Britain, in respect to the division and use of the waters of the St. Mary and Milk Rivers.

Present: Obadiah Gardner, Charles A. Magrath, James A. Tawney, Henry A. Powell, R. B. Glenn, P. B. Mignault; Whitehead Kluttz and Lawrence J. Burpee, secretaries.

Mr. GARDNER. Gentlemen, as chairman of the American section of the International Joint Commission it has occurred to me this morning that we are holding this meeting in the great State of Minnesota, and also in the city of St. Paul, which is quite a factor, I understand, in the social, political, and economic life of the State. As we have a representative on this commission who is a distinguished son of the State of Minnesota. I am going to call upon him to preside at this meeting in recognition of our appreciation of his worth as a man and as a member of this commission. Mr. Tawney, will you kindly take the chair?

Mr. TAWNEY. Mr. Chairman and gentlemen, on behalf of the State of Minnesota I wish to acknowledge the courtesy extended to the State by the chairman in calling upon me to preside at this important special session of the International Joint Commission. I will not take up any of your time at present in making a statement, further than to call upon the secretary of the American section of the commission to read the notice which was sent out on our side of the line and the secretary of the Canadian section of the commission to read the notice which was sent out from the Canadian side calling for this session of the commission. We will then proceed to obtain the appearances of those who are present for the respective interests, both in the United States and in Canada.

(The notices were thereupon read by the secretaries, and are copied into the record in full, as follows:)

WASHINGTON, D. C., *February 19, 1915.*

DEAR SIR: By direction of the International Joint Commission I have the honor to notify you that the commission will meet in St. Paul, Minn., on Monday, May 24, 1915, for the purpose of considering the following article of the

treaty of January 11, 1909, between the United States and Great Britain, in respect to the division and use of the waters of the Milk and St. Mary Rivers:

"ARTICLE VI.

"The high contracting parties agree that the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purposes of irrigation and power, and the waters thereof shall be apportioned equally between the two countries, but in making such equal apportionment more than half may be taken from one river and less than half from the other by either country, so as to afford a more beneficial use to each. It is further agreed that in the division of such waters during the irrigation season, between the 1st of April and 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of St. Mary River, or so much of such amount as constitutes three-fourths of its natural flow.

"The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of waters diverted from the St. Mary River. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance of such waters through the Milk River.

"The measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the International Joint Commission."

Under this article (VI) of the treaty, you will note that the measurement and apportionment of the waters of the Milk and St. Mary Rivers must be made jointly under the direction of the International Joint Commission. Before entering upon the discharge of this duty the commission deems it necessary to hear all parties in interest upon the various questions involved in respect thereto. The session at St. Paul, the place suggested by the two Governments as most convenient for all concerned, is for the purpose of hearing the representatives of the United States and Canada, the State of Montana, the Provinces of Alberta and Saskatchewan, and any others on either or both sides of the boundary in respect to the equal apportionment of these waters, the prior appropriation by the respective countries, their beneficial use, and any and all other questions involved in the interpretation of said article of said treaty, as affecting the rights and interests of all concerned in both countries.

You are respectfully requested to notify any local interests you may think should be represented at this hearing.

I inclose for your information a copy of a report made to the commission by a committee, consisting of Commissioners Gardner and Powell, relative to certain physical and legal aspects of this matter. The sessions will be held in the Federal Building at St. Paul, Minn., beginning at 10 a. m.

Very respectfully,

WHITEHEAD KLUTTZ, *Secretary.*

OTTAWA, CANADA.

NOTICE.

MEASUREMENT AND APPORTIONMENT OF THE WATERS OF THE ST. MARY AND MILK RIVERS AND THEIR TRIBUTARIES IN THE STATE OF MONTANA AND THE PROVINCES OF ALBERTA AND SASKATCHEWAN.

Whereas Article VI of the treaty between the United States and Great Britain, signed January 11, 1909, provided for the measurement and apportionment of the waters of the St. Mary and Milk Rivers between the United States and Canada, under the direction of the International Joint Commission; and it is desirable that all parties interested should be heard with respect to the construction of the article, both in regard to the precise waters which are to be divided and the amounts thereof that should be apportioned to the United States and to Canada, respectively—

Notice is hereby given that the International Joint Commission will, on the 24th day of May, A. D. 1915, in the Federal Building, at the city of St. Paul, in the State of Minnesota, hear all parties that may be interested in the above matter.

LAWRENCE J. BURPEE,
Ottawa, Canada,
WHITEHEAD KLUTZ,
Washington, D. C.,
Secretaries, International Joint Commission.

MR. TAWNEY. I would suggest to the secretary of the American section of the commission that he read the report of Messrs. Powell and Gardner that accompanied the notice sent out on the American side, in order that it may form a part of the record.

(The secretary of the American section thereupon read the report referred to, which is copied into the record in full, as follows:)

OCTOBER 6, 1914.

THE INTERNATIONAL JOINT COMMISSION:

We, the undersigned, members of the commission, having been appointed a committee to look into the matter of the division of the Milk and St. Mary Rivers, beg to report as follows:

Having decided that it was necessary to visit the locality where these waters are and to personally investigate matters, we went to southern Alberta and the State of Montana in the month of July last. We first spent a few days at Calgary looking into reports which had been prepared by the irrigation branch of the department of the interior, in charge of Mr. Peters. Having obtained from him the necessary data, we examined the operation of the irrigation system of the Canadian Pacific Railway Co. to the eastward of Calgary, after which we proceeded to Lethbridge, and there inspected the operation of the irrigation canals which tap the waters of the St. Mary River. We next motored down through southern Alberta to the lakes which are the source of the St. Mary River, in the State of Montana; inspecting on the way the irrigation system of the Canadian Pacific Railway in southern Alberta, which uses the waters of the St. Mary River; and also the construction of the canal which is being built by the United States Government to carry its share of the waters of the St. Mary River to the Milk River; and the construction of the storage reservoirs being built by the same Government in the State of Montana.

The task of dividing the waters of the two rivers devolves upon the commission by the terms of the treaty of 1909, and the primary object of our trip was to consider what was necessary to be done in order to perform the duty thus assigned to the commission.

The irrigation is essential to the development and well-being of both southern Alberta, in Canada, and the valley of the Milk River, in Montana. The needs on the United States side of the line have been recognized by its Government and the works now in process of construction will involve an expenditure on the part of that Government of somewhere between \$10,000,000 and \$15,000,000. It appears to your committee that the present is an opportune time for the commission to consider certain difficulties that arise in connection with the work devolving upon it.

In the first place there are certain difficulties of construction of the treaty which must be settled before the work of the division of the waters can be undertaken. These grow out of the wording of Article VI of the treaty. This article provides for the equal apportionment of the combined waters of the two rivers, and the commission is not limited to an apportionment in moiety of the waters of either river. The article provides, however, that in the division of the waters the United States is entitled to a prior appropriation of 500 second-feet in the waters of the Milk River, and that Canada is entitled to a prior appropriation of 500 second-feet in the waters of the St. Mary River, the qualification in each case being in the following words: "or so much of such amount as constitutes three-fourths of its natural flow."

The opinion prevailed among some interested that the two countries were entitled to an absolute preference in the respective rivers up to 500 second-feet, and then, in addition, were also entitled to three-fourths of the flow where such three-fourths exceeded 500 second-feet. Other constructions suggest themselves, and your committee are of the opinion that the first step to

be taken by the commission is to have a hearing of the parties interested, with a view of determining the correct construction to be placed upon the words of Article VI.

In addition to the above, a difficulty is likely to arise in connection with the storage of the waters of these rivers. At the time of your committee's visit there was not 500 second-feet of flow in the St. Mary River. During freshet season the flow of both rivers is quite large, and the storage facilities which are being provided by the United States Government will impound a large percentage of the freshet waters for use during the dry season when it is necessary to resort to irrigation in both countries. The division of this freshet water will be a difficult matter and one which your committee thinks should be settled by this commission as soon as possible, especially in view of the fact that large expenditures are being made by the United States Government and that a survey is being made by the Canadian Government with a view of providing storage facilities in Canadian territory.

There are other problems involved, such as the point at which the waters of the Milk and St. Mary Rivers are to be measured for the purposes of apportionment. Your committee is also of the opinion that inasmuch that under the treaty both countries are interested in the waters of both rivers it is essential, in order to secure an equitable division of the waters of these rivers, that the distribution should be under the supervision of a joint board consisting of two competent persons, one to be appointed by the United States and one by Canada.

In submitting this report we may say that we have not touched upon all matters which may be subjects of controversy or upon which differences of opinion may be entertained. We have merely touched upon certain salient features which call for consideration by the commission in the near future.

Dated this 6th day of October, 1914.

O. GARDNER.
H. A. POWELL.

Mr. TAWNEY. Gentlemen, heretofore all hearings of the International Joint Commission have been initiated upon the motion of either one or both of the two Governments, or upon the initiative of the people in either or both countries, and these hearings proceeded upon the stated issues that were clearly set forth in the pleadings that were submitted by the parties under the rules of the commission. This hearing, as you know, will have to proceed, and has thus far proceeded, upon the initiative of the commission itself, without any stated issues.

Before we proceed with the hearing the next step will be to have those present representing the interests on both sides of the line enter their appearances, so that the commission may know and the record may show for whom they appear. We will begin with the representatives of the two Governments—the Government of the United States and the Government of the Dominion of Canada—then the Provinces, and then those who are representing private interests on either side of the line.

(The following appearances were announced:)

For the United States Government:

Mr. Manton M. Wyvell, counsel for the United States, Washington.

Mr. Morris Bien, counsel, Reclamation Service, Department of the Interior, Washington.

Mr. W. J. Egleston, counsel for the Reclamation Service of Montana, Grand Falls, Mont.

Mr. F. H. Newell, Reclamation Service, Department of the Interior, Washington.

Mr. R. M. Conner, Reclamation Service, Department of the Interior, Washington.

Mr. N. C. Grover, Geological Survey, Washington.

Mr. G. C. Stevens, Geological Survey, Washington.

For the Dominion of Canada:

C. S. MacInnes, K. C., counsel for the Dominion Government, Ottawa.

Mr. W. J. Stewart, chief hydrographer, Ottawa.

Mr. E. F. Drake, superintendent of irrigation, Ottawa.

Mr. F. H. Peters, commissioner of irrigation, Calgary.

Mr. R. J. Burley, irrigation engineer, Calgary.

Mr. Alfred Spreckley, irrigation engineer, Ottawa.

For the State of Montana:

Mr. D. M. Kelly, attorney general, Helena, Mont.

Mr. A. W. Mahon, State engineer, Helena, Mont.

For the Province of Alberta:

Mr. J. D. Hunt, counsel for the Province of Alberta.

Mr. J. Stocks, deputy minister of public works, Edmonton, Alberta.

For the Province of Saskatchewan:

Mr. A. F. Mantle, deputy minister of agriculture, Regina, Saskatchewan.

For the Water Users' Association of the Lower Milk River: Mr. W. B. Sands, Chinook, Mont.

For the Upper Milk River Water Users' Association: Mr. Henry O'Hanlon, Chinook, Mont.

For the Western Canada Irrigation Association: Mr. W. Pearce, Calgary.

For the Cypress Hills Water Users' Association: Mr. R. J. Burley, Calgary.

For the Great Northern Railroad: Mr. E. C. Lindley, counsel, St. Paul, Minn.; Mr. R. Budd, assistant to the president, St. Paul, Minn.; Mr. E. C. Leedy, St. Paul, Minn.

For the Canadian Pacific Railway Co.: Mr. M. S. Gunn, counsel, Helena, Mont.; Mr. G. A. Walker, counsel, Calgary, Alberta; Mr. J. S. Dennis, assistant to the president, Calgary, Alberta.

Mr. TAWNEY. Gentlemen of the bar of the United States and Canada, and citizens of both countries, the chair has already indicated that this hearing proceeds upon a motion of the commission itself without any stated issues. The commission has had no opportunity of conferring, previous to this time, with respect to the mode of procedure. Thus far, although the matters that have been heard and determined by the commission have been of very great importance to the people of both countries and to their respective Governments, the judgments of the commission have been in every instance except one unanimous. It has been the effort of the commission to afford the people of both countries every possible opportunity for conference among themselves, with a view to reaching a common understanding with reference to any matters of difference that might exist between them or between the Governments. Inasmuch as the commission has not itself considered the exact mode of procedure, it is unable at this time to state just what the procedure should be. It has been suggested that it might be advisable and would conduce probably to a more satisfactory result in the end if the commission should now adjourn until to-morrow morning at half past 10 o'clock. This is suggested especially in view of the fact that there is another matter pending before the commission which it desires to consider in executive session this afternoon with respect to the hearing of two other cases that must be heard somewhere in the State

of Maine respecting the obstruction and diversion of the waters of the St. Croix River that mark the boundary between the United States and the Province of New Brunswick. If that is agreeable to the gentlemen present and all of my associates, we will adjourn until half past 10 to-morrow morning.

It is suggested by my colleagues that possibly there may be some one present who desires to be heard to-day in order that he may get away, having business elsewhere that requires his attention, and if that is the case we will take a recess until this afternoon, say, at 3 o'clock. Otherwise we will adjourn until half past 10 to-morrow morning. If there are any gentlemen here representing either the Government or private interests who desire to be heard this afternoon, we might proceed to hear them, although it might be probably a little out of the order of procedure that may be ultimately decided upon by the commission. Nobody answering, I take it for granted that you gentlemen have all come prepared to remain at St. Paul—I know the citizens of St. Paul will be glad to have you—and we will now adjourn until half past 10 o'clock to-morrow morning.

(The commission thereupon adjourned until to-morrow, Tuesday, May 25, 1915, at 10.30 o'clock a. m.)

TUESDAY, MAY 25, 1915.

Pursuant to the adjournment, the commission met at 10.30 o'clock a. m., all the members being present, and Mr. Tawney presiding.

Mr. TAWNEY. Gentlemen, the commission stated yesterday that the object of this special session is to hear the parties in interest in both countries with respect to the measurement and apportionment of the waters of the St. Mary and Milk Rivers between the two countries for irrigation and power purposes. This hearing having been initiated by the commission itself, it is natural for those appearing to expect the commission to indicate in advance the plan of procedure.

By the express terms of the treaty of January 11, 1909, it is made the duty of the commission to direct the properly constituted reclamation officers of the Government of the United States and the properly constituted irrigation officers of His Majesty to measure and apportion the waters of the St. Mary and Milk Rivers and their tributaries in Montana, Alberta, and Saskatchewan equally between these two countries upon the basis of beneficial use. Before directing these officers of the respective Governments in the matter of the apportionment of these waters, we have deemed it not only advisable, but in the interest of continuing that friendly and very cordial relation that has always existed between the Dominion of Canada and the United States, to obtain the views of both of the Federal Governments, the Provinces, and the State of Montana, as well as the views of private interests in both countries as to how these waters should in their judgment be equitably apportioned under the treaty and thereby best promote the interests of the people in both countries. We have, therefore, concluded in the interest of orderly procedure to suggest that we first hear the representatives of the two Federal Governments, then the representatives of the Provinces of Saskatchewan and Alberta and the State of Montana,

and, thereafter, hear the representatives of private interests on both sides of the line.

Of course, anyone appearing who may desire to supplement any statement he may make at the outset will be given an opportunity to do so or to reply to any statement that may be made to which he deems a reply necessary.

It is also suggested that we first ascertain whether or not the representatives of the Federal Governments are prepared to submit at the outset an agreed statement of the facts bearing upon the measurement and the apportionment of the waters in question; that is, as to the time the measurements of the waters of the St. Mary and Milk Rivers and their tributaries in Alberta, Saskatchewan and Montana have been continued, the places of location at which these measurements have been made, and with what result as to the question of the flow of the waters of these two rivers and their tributaries; also the areas or approximate areas of lands on both sides of the line and their approximate location to the two rivers involved that may be irrigated by the diversion of the waters of these rivers, including their tributaries in Alberta, Saskatchewan, and Montana.

If there is no agreement between the representatives of the two Federal Governments with respect to these questions, the commission will be very glad to hear their views and also to hear or receive any suggestions that they have to make as to how best ascertain the facts upon which the commission is to determine these important questions of fact so far as they bear upon the question of the beneficial use and prior appropriation of the waters of these two rivers.

There are doubtless many other questions that will arise in the course of the hearing, and it is not the desire of the commission to foreclose any interest upon either side here represented from the consideration of any question that may be deemed important, and which, it may be also thought, has or will have some bearing upon the judgment of the commission in respect to the measurement and apportionment of these waters.

Now, with this statement of the purposes of the hearing and the general outline of the plan of procedure we will hear the parties in interest in this order: First, the representatives of the Government of the United States, then the representatives of the Dominion of Canada, and the Provinces of Alberta and Saskatchewan and the State of Montana, and then we will hear the private interests that are represented in both countries.

I might add, gentlemen, that thus far the International Joint Commission has approached the consideration of almost every question that has been submitted to it, not as partisans or litigants or contestants but more in that spirit of friendship and cordiality that should and has always existed between these two countries, and we are very glad to say that that has been the spirit in which those appearing before the commission have always considered and conducted themselves throughout the hearing, as the result of which thus far the decisions of the commission have been always unanimous and in every instance, so far as we know, entirely satisfactory to the Governments that created the commission, and also to their respective people. Although we recognize the importance of this matter that is now under consideration and we also realize how vitally it affects the

interests and the welfare of the people on both sides of the line, nevertheless the commission indulges the hope that this hearing may be conducted along the same lines and with the same spirit of concession and compromise that has heretofore characterized its work.

Now, Mr. Wyvell, you may proceed.

Mr. WYVELL. Members of the commission, I think it well, perhaps, that a statement of the physical facts and conditions as they appear to the Reclamation Service of the United States should be made first. However, I have prepared a very brief statement of the position of the United States Government with a very brief suggestion added as to the work of the commission, which I will present if you wish.

Mr. TAWNEY. Mr. Wyvell, has there been prepared any agreement as to any of the physical facts that are involved in this dispute?

Mr. WYVELL. Some agreements have been made. For instance, back in 1911 or 1912 agreed points of measurement were selected by the two Governments. As you will recall, a letter was addressed to you by the Reclamation Service on that subject in 1912. The data, unfortunately, has not been entirely agreed upon, but a substantial agreement was made, as I understand it, at a conference of the engineers held yesterday; that is, with regard to certain data which our Government deems important in this investigation. Other data, which it is claimed may be important, can not be determined definitely at this time. Would it not be the best thing to have Mr. Newell make his statement first, then allow the commission or Mr. MacInnes to ask him any questions that they may see fit to ask, and then, if necessary, I will supplement that with a further statement. If that meets with the approval of the commission, I suggest that it be done.

Mr. TAWNEY. It is suggested that that would be satisfactory, provided the statement is confined exclusively to the physical facts at the present time rather than to any argument that may be based upon the facts.

Mr. WYVELL. There is no argument, as I understand the statement. However, necessarily this is a subject concerning which opinion must be expressed with regard to conditions. In other words, Mr. Newell has not been on the ground all the time, and in making his statement he must rely upon his own observations supplemented by the reports which the department received both from its own agents and agents on the part of the Dominion of Canada, as well as from information which he has gathered generally. This is not a subject which will lend itself to a bare statement of facts like a court case, as your honors will readily appreciate. It is a big subject and one upon which opinions must be expressed in some particulars.

Mr. TAWNEY. We will hear Mr. Newell.

STATEMENT OF F. H. NEWELL, CONSULTING ENGINEER OF THE UNITED STATES RECLAMATION SERVICE.

Mr. TAWNEY. Before you begin your statement, Mr. Newell, let me ask you what is your present position?

Mr. NEWELL. At present I am consulting engineer of the United States Reclamation Service.

Mr. TAWNEY. How long have you been engaged in that capacity?

Mr. NEWELL. Since December, 1914.

Mr. TAWNEY. Prior to that time, what were your duties?

Mr. NEWELL. From 1907 to 1915 I was Director for the United States Reclamation Service and prior to that, from 1902 to 1907, chief engineer. Incidentally, I may add that I was designated on the part of the Government to consider the preliminaries to drawing up what is now article 6 of this treaty, so that I have had a considerable personal knowledge, not only of the geography but of the negotiations and discussions which have led up to article 6 of the present treaty.

Mr. TAWNEY. I desired that information to appear in the record preceding your statement.

Mr. NEWELL. We are here in accordance with the notification from the secretary of this International Joint Commission, dated February 20, 1915, to the effect that the commission deems it necessary to hear all parties in interest before entering upon the discharge of the duty imposed upon it by the last clause of article 6 of the treaty of January 11, 1909. This clause states that—

The measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the International Joint Commission.

Importance of action: The time will soon arise when the United States will be ready to divert from St. Mary River, Mont., water which otherwise would flow into Canada, and by means of a canal now approaching completion carry some of this water across the watershed to Milk River to flow easterly through a portion of Canada to lands in the lower valley of Milk River in Montana. The total cost of the proposed works, of which this diversion is an essential part, is about \$8,000,000 to irrigate nearly 220,000 acres of arid and semiarid land. Of this estimated cost of \$8,000,000 about one-half, or \$4,000,000, has been expended. It will not be necessary to complete all of the proposed works, however, before water can be used, as the works already partly completed will begin to deliver water before all portions are finished. It is probable that some water may be turned into the canal for irrigation purposes possibly late this year or early in 1916. In view of this condition it now appears desirable for the International Joint Commission to take formal action in accordance with Article VI of the treaty with Great Britain, signed at Washington January 11, 1909, proclaimed May 13, 1910.

Physical conditions: I would like to explain here in a somewhat elementary fashion the physical conditions so that the record will be intelligent to all who may be interested. In order to explain the necessity for this article in the treaty, it is necessary to make clear the principal physical or geographic conditions. The Milk River, which flows in a general easterly course not far from the international boundary between the United States and Canada, receives its water supply from occasional storms or showers falling upon a rolling or undulating country. It does not have at its source any notable mountains, such as furnish to many other streams a relatively steady flow. The upper course of the river lies mainly to the north of the boundary. After continuing for about 210 miles in Canada, during which it falls about 1,475 feet, or 7 feet per mile, the river makes a turn to the southeast, crossing the boundary, and then continues in a

general easterly course, flowing through the principal valley of northern Montana, most of the water, or perhaps 60 per cent, arising in the United States as measured at the point where it passes the eastern crossing. Many small irrigation canals and ditches have been built to take the water from Milk River and its tributaries, some of them being in Canada, but the greater number in the United States. The water supply is so erratic, however, and the State laws governing its appropriation so incomplete, that the development of agriculture by irrigation has been halting and unsatisfactory.

Lying to the west of the headwaters of Milk River is the main range of the Rocky Mountains and the high peaks now included within the Glacier National Park. Large torrential streams issue toward the east from these mountains. It is obvious that under ordinary conditions these streams should unite and continue flowing toward the east to what is now the channel of Milk River. The explanation as to why the streams do not thus continue down the eastern slope of the Great Plains is probably to be found in the fact that during recent geologic times the glaciers coming from the north left a great deposit of clay, gravel, and boulders, resulting in an intercepting ridge which has forced the waters from the high mountains to turn abruptly northward forming St. Mary River, which in turn discharges into the Belly and then into the Saskatchewan or Hudson Bay drainage.

The project now under construction by the Reclamation Service of the United States Government may be pictured as an attempt to turn easterly some of these waters into what, in former geologic times, may have been their proper course, or, to put it in another way, to enlarge the catchment area of Milk River by restoring to it some of the mountain drainage area from which it is cut off by the clay and boulder hills which now constitute its upper catchment area.

There is little if any irrigation directly from St. Mary River in the United States—possibly one or two small canals—but shortly after passing to the north across the boundary there is one large canal now owned by the Canadian Pacific Railway Co. which diverts water toward the east and also some smaller irrigation ditches.

On the headwaters of St. Mary River in the United States are opportunities for storage of water, but after entering Canada the conditions for storage on the main stream are not as favorable. There are, however, a number of depressions or basins which may be filled by canals diverting water from the river. The filling of these is limited by the capacity of the canals which may be built, whereas on the main river in the United States, as for example in the St. Mary Lake, the entire flow may be held, but in Canada only that portion can be caught which can be taken out of the river by canals the capacity of which is far less than the flow during the brief high-water season.

In the case of Milk River the condition is reversed in that there are few, if any, good reservoir sites on the headwaters, but lower down in Montana there are opportunities for storage such as may be utilized in holding the floods.

The peculiar interrelation of these two streams is such that the best development of the agricultural lands both in Canada and the

United States depends upon an effective cooperation by which the waters of the two rivers may be stored or regulated. In the interest, therefore, of the largest development and use of the arid lands, as well as of international comity, the treaty has been negotiated, the underlying thought being of equal division of the water of the two streams passing the boundary, not as separate entities, but considered as one. It was early seen that a simple rule of this kind could be readily explained and popularly understood, and in spite of minor objections would undoubtedly meet with general approval.

Quantity of water: In defining the quantity of water I should like to insert in the testimony a definition as to what units we use. In speaking of the flow of these rivers we describe them in cubic feet per second; that is, 1 foot deep moving at the rate of 1 foot a second, but when we speak of storage we use a different quantity, a quantity which would cover 1 acre 1 foot in depth. An acre contains 43,560 square feet, and, therefore, an acre-foot would be 43,560 cubic feet. Now, there is a simple relation between these two, in that a cubic foot per second flowing for one day, or 86,400 seconds, would deliver 86,400 cubic feet, which is nearly twice an acre-foot; a cubic foot per second flowing for 24 hours equals 1.98 acre-feet, so that, roughly speaking, you can multiply the cubic feet per second by two and get the acre-feet per day. There is a third unit which may be included in this discussion, and that is the miner's inch, which engineers have agreed in general to abandon except as it is embodied in State laws and uses. Forty to 50 miner's inches are equivalent to 1 cubic foot per second.

The two rivers, the St. Mary and Milk, are widely contrasted in the quantity of water discharged throughout the year, and also in the time and character of the floods, the St. Mary River receiving water from the melted snow and ice in the high mountains in the form of a comparatively regular June flood, the flow of the stream increasing through May, culminating in June, and dropping off during July and August with considerable regularity. We have certain hydrographs or diagrams showing for a number of years the characteristic behavior of these rivers.

The milk River, on the contrary, receives its water from rainfall on the rolling plains or low hills and has no regularly recurring spring flood comparable to that of the rivers from the high mountains. The floods when they do occur near the boundary are of short duration, rising to a thousand cubic feet per second or more, and quickly dropping off. Frequently in April, there has been a flood due to the general melting of the snow by the so-called Chinook winds. During June, when St. Mary and similar rivers are in flood, the Milk River is often at a low stage.

The suddenness with which the occasional floods occur prevents economical use of the water. At such times when water is available it is freely used and an excess turned to the fields. The floods, if of unusual volume, may injure or destroy the dams and headworks and thus cripple the canals, so that even during this time of plenty not enough can be turned into the distribution systems. The conditions in the lower Milk River Valley, because of lack of regulation, have been very unfortunate in that in low water there is none to be had, and in floods frequently the headworks are washed out.

Historical: The peculiar conditions above noted of the headwaters of Milk River being cut off from the high mountains were early known. Examinations were made by various engineers to ascertain whether the Milk River could be extended westerly and connected up with streams from the mountains. In particular, Mr. E. S. Nettleton in September, 1891, made a reconnoissance over the proposed route, the result being published in Senate Document No. 41, Part 2, Fifty-second Congress, first session, in which he states: "No part of the river in the United States receives water draining off the Canadian soil, and the diversion of this water for beneficial uses in Montana rightfully belongs to the United States." These explorations of Nettleton and subsequent engineers shows the existence of a practicable project, but the difficulties and costs were then underestimated. Later surveys demonstrated that water could be taken out of St. Mary River or Lake, carried along and across the divide, and either dropped into the North Fork of Milk River or carried on southerly into drainage lines which did not enter Canada. Subsequent estimates based on the cost of the proposed structures for an "all U. S. line" show that the work is possible from an engineering standpoint, but is relatively more expensive than the alterations now proposed; that is, keeping the St. Mary River water in the United States and not turning it into Canada.

About the same time that these early investigations and discussions were going on, the Canadian Government made an agreement or grant to the Canadian Northwest Irrigation Co. conveying to this company, it is understood, about 600,000 acres of land contingent on its reclamation. In order to provide necessary water the company was allowed to take from St. Mary River 500 second-feet of low-water discharge and 2,000 second-feet of the flood discharge. Subsequently this company transferred these rights to the Alberta Railway & Irrigation Co., and in turn these became the property of the Canadian Pacific Railway. The Alberta Railway & Irrigation Co. canal, locally known as the Canadian Pacific Railway Co.'s Lethbridge system, heads about 5 miles north of the international boundary and has a capacity claimed to be 1,000 cubic feet per second. A large area of land has been brought under cultivation and crops obtained from probably over 80,000 acres.

In the meantime the growing demand for water in the Milk River Valley in Montana and the development of the scheme for obtaining more water from St. Mary River, have aroused great interest in the subject, especially when it was learned that water could be diverted from St. Mary River and kept on the south side of the boundary. It was quickly appreciated that, as before stated, the best result for both countries could come, not from strife over the water supply but by a broad, mutually beneficial and constructive policy by which both countries might obtain the largest possible use of the water. At the same time this interest was stimulated by the fact that on the Canadian side a canal was built in 1904 from Milk River, which, in the opinion of the people in the lower Milk River Valley, threatened their water supply, and an urgent request was made upon the United States Government and its departments to take steps to prevent what the people of the lower Milk River Valley regarded as an invasion of their vested rights. As a result

of that discussion, in 1904 and 1905 various drafts of treaties were considered, and on March 24, 1908, I was designated officially to assist in the preparation of these drafts, which, as before stated, have presumably been used in the preparation of Article VI.

From what has been stated above, it is apparent that Article VI of the treaty was based upon a desire on the part of all parties concerned to fairly and amicably settle what threatened at one time to develop into a difficult situation, and to do this by means of some relatively simple rules whose application might be worked out in detail in future to meet the conditions as they arose. The question of absolute or relative equities was thought to be so involved that it would be practically impossible to adjust all of these under the apparently irreconcilable conditions which had developed. Recourse was then had to the idea of equality as the most practical solution of these equities.

Equality of flow: The idea discussed in framing the treaty was that all of the waters which cross the international boundary in the drainage basin of the Milk River and St. Mary River shall be apportioned equally for use between the two countries, treating these as belonging to one stream, and then to give to each country in the aggregate each year an equal amount of the united flow irrespective of the locality where this occurs. This conception, as above stated, is easily grasped, and while many difficulties may be encountered in practical operation, yet adherence to this conception of equality will serve as the final test.

Annual equality: The period within which the waters shall be apportioned equally between the two countries is not stated in the treaty, but from a reading of the entire article it is apparent that this equality relates to the annual discharge and not to daily or monthly aggregates. Thus, in making the division one country may receive during any one day or month or during the flood season a larger quantity of water than the other country, but later in the year the equality can be restored so that at the end of the year the amount of water chargeable to each country will practically balance, and each year will be treated independently on the basis of the beneficial use.

More than half from one river: The volume of St. Mary River is several times that of Milk River where it crosses the boundary, and in studying the data available when framing the treaty it was apparent that it would not be possible to apportion the water equally between the two countries unless more than half should be taken from one river and less than half from the other river by either country. Therefore a clause was inserted in order that there might be no possibility of a misunderstanding on this point.

Beneficial use: The object of the treaty is obviously to secure beneficial use of the waters of these two streams for the purposes of irrigation and power. I may add that it is not with the idea of repressing either country, but with the idea of stimulating the development of each country to the highest possible point. This object has not been emphasized in proportion to its importance, but it is specifically mentioned in connection with the way in which the water may be apportioned, the rigid application of any rule being subject to the consideration of the needs of each country. The apportionment

is thus to be made at all times and in such way as to afford a more beneficial use to each country than would be possible if one-half of the water of each river were given to each country.

Priority: The next important matter after agreement upon beneficial use and equality is that of priority. It was recognized that because of the use of water in Canada from St. Mary River there had grown up under western conceptions a certain priority which entitled the lands then irrigated to first call on the available water supply. The same condition existed in the Milk River Valley in Montana, where early beneficial use gives these lands precedence over others which might be irrigated later. This is in accordance with the rule which prevails generally throughout the arid regions and which have been incorporated in the irrigation act of January 17, 1902, to the effect that "First in time is first in right, and that beneficial use is the basis, the measure, and the limit of this right." The treaty limits the extent of this priority in each case, as has been stated, to 500 cubic feet per second.

As this matter of priorities was found to involve innumerable and complicated questions of equity, the simple solution was sought in the agreement in Article VI of the treaty "That in the division of such waters during the irrigation season between the 1st of April and the 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of Milk River"—at that time that was our nearest estimate of the amount of water which was needed to fill those priorities—"or so much of such amount as constitutes three-fourths of its natural flow"—in other words, when the river dropped below 500 cubic feet per second, as it frequently did, it was not desired to cut off all the canals in Canada, but to permit Canada to take one-fourth of the diminished amount and the United States three-fourths—"and Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of St. Mary River, or so much of such amount as constitutes three-fourths of its natural flow."

To put the situation in another way, while adherence is given primarily to the theory of equally dividing the combined flow each year, yet it was recognized that an equal division of each separate river would not result in the greatest benefit, as one country might be deprived of water which it could beneficially use at a certain time or place and without corresponding gain to the other country. If the Canadian canals, for example, are better situated to use at some seasons more than half of the St. Mary River water they should be permitted to take more than this half, and the United States in turn receive more than half of the Milk River water if it develops, as it probably will, that a larger beneficial use can be enjoyed by such division.

Three-quarter rule: The flow of St. Mary River during the winter season is less than 500 cubic feet per second, but at that time there is little or no use of the water in Canada, and the Canadian canals are practically dry. There is little probability of there being any demand in the near future for this winter water in Canada.

At or before the beginning of the irrigation season St. Mary River usually rises rapidly to a discharge of from one thousand to several thousand second-feet and falls more slowly during the latter part of

the irrigation season. It rarely remains for any considerable time at or near the 500 second-feet stage. It was appreciated that little difficulty would result in assigning to Canada a prior right to 500 cubic feet per second. In the case of Milk River the conditions are different.

Milk River rarely carries during any considerable period as much as 500 cubic feet per second of water across the eastern boundary. At irregular intervals there are floods which reach to a thousand second-feet or more, but these subside rapidly. The claims to the water of Milk River in the United States aggregate far more than 500 cubic feet per second, while those in Canada are relatively small. As in the case of St. Mary River, the number of days during which the river is at or near 500 cubic feet per second are few, but there are many days when there might be controversy regarding the diversion of the relatively small amount of the natural flow available for lands in Canada and the United States. Whenever at rare intervals there is an amount of over 500 cubic feet per second, the United States is entitled to a prior appropriation of 500 cubic feet per second, and during the remainder of the year (or practically most of the time) when there is less than 500 cubic feet per second, then the United States may have three-fourths of the natural flow.

The words "natural flow" in this connection are used advisedly, because of the recognition that during most of the irrigation season there will be less than 500 second-feet naturally in Milk River, and to supply the lands to be irrigated in Milk River Valley there will be diverted a large amount of water from St. Mary River or St. Mary storage reservoir. If, therefore, Milk River, under natural conditions, will be carrying 400 second-feet, the United States would be entitled to 300 second-feet of this natural flow. As the flow of Milk River increases, the three-fourths amount would gradually increase until, for example, the natural flow becomes 667 second-feet. Then the United States will be entitled to have 500 second-feet.

Use of channel: The equal division of waters and recognition of beneficial use, priority, etc., would be of little practical advantage to the United States unless this were coupled with the use of the natural channel of Milk River in conveying a portion of the half of the water belonging to the United States. That is to say, that while we could carry this water entirely south of the boundary, yet, as before stated, the cost would be very large, and therefore for economy and efficient use we wish to obtain use of the natural channel of Milk River. No valid objection has been raised to such use as the channel is capable of carrying a considerable volume of water, and, in fact, does carry during the floods a thousand or more second-feet.

The question has been raised as to the effect on the channel of a steady flow of several hundred second-feet such as would be derived from the St. Mary Reservoir, particularly as to whether this flow would cause an erosion or disturbance of natural conditions such as have not prevailed during the times of the short sudden floods. That is to say, when the treaty was negotiated it was seen that while a short, quick flood might not erode the banks it was argued that a continued flow might change the natural conditions. To meet this point, which was believed to be somewhat theoretical, the general provision was made that any injury resulting to property in Canada

from the conveyance of such waters from St. Mary River through Milk River should be met by the provisions of article 2 of the treaty.

Methods of apportionment: The treaty provides that the measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the International Joint Commission. The most important step to be taken in the near future, therefore, is for the International Joint Commission to assume the direction of the measurement and apportionment of the waters to be used. In anticipation of such action the reclamation officers of the United States have arranged with the water resources branch of the United States Geological Survey to continue and amplify the measurements which have been carried on more or less continuously since 1902. The Canadian irrigation officers, notably Mr. F. H. Peters, commissioner of irrigation, have cooperated in this work, and Mr. Peters has already published in his annual reports some of the important data for recent years. There is little, if any, change to be desired in the present system other than that the joint commission shall assume the direction as required by the treaty and give the result the proper recognition from the standpoint of the treaty obligations. We need more river stations, particularly on those tributaries which lie to the east of the eastern crossing of Milk River and which flow from Canada into the United States.

Mr. TAWNEY. When were those measurements that you were just speaking of begun?

Mr. NEWELL. I think they were begun on the four international stations about 1911 or 1912. Mr. Peters can correct me, if I am mistaken.

Mr. MACINNES. When the stations were brought together, you mean?

Mr. NEWELL. Yes, sir.

Waterwasted: In carrying out the apportionment which would have taken place during the past years had the proposed action been completed, it has been found that neither country could have used all the water. During the days of high floods it is not practicable to hold all the water in storage reservoirs or divert all of the floods. Some of it must go to waste, and while it is possible to apportion this quantity between the two countries, yet the object of the treaty was to deal not with the water which must necessarily be wasted, because of its erratic occurrence, but rather with the water which could be used as set forth in the last clause. In making the apportionment, therefore, the operation is to a certain extent simplified by being confined to a consideration of the water which may be used either by direct diversion or by storage. On the other hand, it should not be assumed that because one country is not prepared to use one-half of the water therefore the other country must be deprived of the use of any portion which otherwise would be wasted.

Waters occurring below boundary line: There flow into St. Mary River, in Canada, and into the Milk River, in the United States, numerous tributaries which do not head in the other country; that is to say, along St. Mary River, after it passes the international

boundary, there are numerous tributaries which receive all of their water from Canadian soil, and thus do not cross the boundary. It was obviously not the intention of the treaty to consider these streams in the equal apportionment nor make any charge to either country for the water which, although tributary to St. Mary and Milk Rivers, does not pass over the international boundary, nor would pass if not divided. In the same way, to a greater extent, along Milk River there are numerous shorter streams coming from the north which rarely, if ever, receive water from Canadian soil, and on the south there are streams which lie wholly in Montana, and which, coming from the south, enter Milk River but do not in any way affect the international waters. The waters thus contributed to Milk River are obviously not to be taken into consideration in the apportionment.

This point should be clearly established as questions may arise in the practical operations and applications of the measurements of river flow.

Administrative methods: Under the terms of Article VI of the treaty, as above noted, there is to be an equal apportionment of the waters used by the two countries. In order to arrive at this apportionment it is necessary to have complete facts day by day as to the amount of water used and available for use in the rivers and their tributaries, especially at the points where they cross the international boundary, and to have an agreement on a few fundamentals which are not always susceptible of exact determination.

The system when fully developed must necessarily be quite complicated, and to be effectively carried out must have the undivided attention of experts thoroughly acquainted with all of the limitations. At present, however, it is essential to consider only a few of the larger facts, and for the time being lay aside minor modifications which will later enter into the practical application of any rules which may be laid down.

The commission has asked for the views of the representatives of the two countries, and in that connection I would state, in closing, that in my opinion the action of the International Joint Commission should be—

First. Under the last clause of Article VI to call upon the respective Governments to designate their properly constituted officials.

Second. That when those properly constituted officials have thus been designated, the International Joint Commission recognize them as their executive officers.

Third. That these men be called upon for a report on the measurements and quantities already measured and agreed upon, and for such facts concerning the use of the water as are matters of public knowledge and record.

Fourth. That, when this has been determined upon, they also make recommendations for more measurement stations and more data, which must be accumulated in the near future in order to enable executive action.

Fifth. That at the same time they make an estimate or budget of the amount of money required to carry on this work of river measurement, which obviously must be somewhat expensive, and for making any further surveys which may be required to determine the boundaries of irrigated lands and proposed canals.

Sixth. That they be authorized by the International Joint Commission, as their representatives, to continue measurements at the points which are agreed upon, and that they then receive, consider, and act upon the instructions of the International Joint Commission with regard to the apportionment of the water.

From our standpoint there is need of more complete data and less necessity in the immediate future of any apportionment, particularly of the large flow of St. Mary River. We anticipate that for a number of years there will be ample supply of water for all concerned, and that during the present decade or generation there may arise no questions which can not be answered by practical, well-informed men designated as the executive officers of this commission.

Mr. GLENN. I did not want to interrupt you while you were talking, Mr. Newell, but, speaking in regard to those tributaries arising south of the boundary line in Montana and north of the boundary line in Alberta, you say that they do not flow into the United States or into Canada. You say that those could not possibly be taken into consideration. The language of Article VI is as follows:

The high contracting parties agree that the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purpose of irrigation and power.

There is no proviso there saying that that shall not apply to rivers that arise south or north in any way. It would look to me as if all tributaries were to be taken into consideration. Where did you get your construction of that?

Mr. NEWELL. Our understanding of the treaty as a whole is that it relates to the boundary waters and the questions which have arisen concerning the boundary waters. There has never been any question arising concerning waters which do not cross the boundary, and all the negotiations which led up to Article VI of this treaty have considered only those waters which flow across the boundary or which would have flowed across the boundary if not interrupted.

Mr. MACINNES. That, of course, would be purely controversial.

Mr. NEWELL. Article VI states:

The high contracting parties agree that the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan).

I read that as qualifying those waters which arise in and pass from one into the other of these States or Provinces. The meaning of that parenthetical clause is to limit and confine the waters to the boundary streams. Of course, I apologize for stating matters which may be in controversy.

Mr. POWELL. In other words, to boil it down, you say that the Milk River means a portion of the Milk River, the St. Mary River means a portion of that river, and the word "tributaries" means some tributaries and not all of them?

Mr. NEWELL. Yes; those which are of international character.

Mr. POWELL. Within the four corners of the treaty, what would you call our attention to which would warrant a limitation of that kind?

Mr. NEWELL. First, the treaty itself, its whole context; and, secondly, to this limiting clause, "In the State of Montana and the

Provinces of Alberta and Saskatchewan," believing as I do that that limits this to the waters which arise on one side of the boundary and would pass across to the other.

Mr. POWELL. That may be conceded on the other side.

Mr. MIGNAULT. Do I understand that you make an argument, Mr. Newell, upon the fact that these rivers would be boundary waters? I think the definition of "boundary waters" would be against that.

Mr. NEWELL. I was not attempting to make an argument. I will leave the argument to our legal brethren, and I will merely answer the question about the treaty.

Mr. TAWNEY. Mr. Newell, where are these four measurement stations located?

Mr. NEWELL. As I recall them, the first is on the St. Mary River as near as possible to the international boundary, and for convenience, I think, immediately below the boundary and above the head of the Lethbridge Canal. The second is on the North Fork of Milk River near where it passes over the boundary toward the north. The third is on the South Fork of the Milk River where it passes north into Canada. The fourth is on the eastern crossing of the Milk River, coming from Canada into the United States.

Mr. TAWNEY. There are no measurement stations on any of the tributaries, then, to the St. Mary River in Alberta or tributaries to the Milk River in Canada?

Mr. NEWELL. In addition to those four the Canadians have a number of stations to the north and we have a number of stations to the south on tributaries, but I was not referring to those in our discussions.

Mr. POWELL. We can get a list of those, can we not?

Mr. NEWELL. Yes, sir. I may say that the engineers have been meeting and have been checking up their figures. We have practically agreed upon the geographic facts which are shown upon these maps that are presented to you and upon the river flow which has been published in part by the United States Geological Survey and in the reports of the Canadian Government prepared by Mr. Peters.

Mr. TAWNEY. Are you acquainted with the extent of land areas on either or both sides of the line that is available for irrigation by the waters of these two rivers?

Mr. NEWELL. In a general way, yes; and specifically in some instances very well acquainted.

Mr. TAWNEY. Have you any maps here that would indicate the extent of those areas?

Mr. NEWELL. We have not. The areas which may be irrigated far exceed the extent of the water supply, so that such a map would be largely a map of the entire valley and the uplands of the Milk River. There has been brought into irrigation at one time and another and provided with a small amount of water an area far in excess of what may be provided with a steady flow. There are now claimed to be irrigated many thousands or hundreds of thousands of acres for which there is no dependable supply of water.

Mr. TAWNEY. If that is the case, how do you explain your statement that there would be no controversy between either the Governments or the people for possibly a generation over the question of the quantity of the water that would be needed for irrigation purposes?

Mr. NEWELL. That point related to the diversion of water from St. Mary over into Milk River—that is to say, we are building a canal from St. Mary River to Milk River with an ultimate capacity of about 800 cubic feet per second. It will be completed in the near future to about half capacity. We are completing on Sherbourn Lake a reservoir which will help furnish the water. The flow of St. Mary River and the diversions from that river are so large that well-informed, practical men representing your commission could undoubtedly permit to be diverted and turned over through this canal all the water which may be needed for many years without the question of scarcity of supply from the St. Mary River coming up. Of course, if you apply that to the question of the lower Milk River Valley, controversies have already arisen there between the citizens, and we hope to allay some of these controversies by the building of canals in the lower valleys, but we will not succeed in satisfying all demands.

Mr. POWELL. You were speaking, Mr. Newell, of making the flow uniform.

Mr. NEWELL. The theory of an executive board of two men or possibly more was worked out, because it was known that the division or apportionment must be made from day to day, not with a knowledge of what will happen in the future but with a knowledge of what has happened in the past and what are the conditions as reported by telegraph or telephone as to the need of water in one part of the country and the excess in another part, so there must be a continual exercise of judgment as to whether the waters should be stored here or diverted there. In drafting the treaty we saw no way of meeting that condition except by having an impartial board appointed under your direction to administer daily, according to the best knowledge, the distribution of that water.

Mr. POWELL. Taking the average season, how many applications would there be for the irrigation water?

Mr. NEWELL. Do you mean from individual farms?

Mr. POWELL. Yes.

Mr. NEWELL. I think the applications would come rather from companies.

Mr. POWELL. Say we have a tract of land of 160 acres. How many times during an ordinary season would it be requisite to irrigate that land?

Mr. NEWELL. Under dry-weather conditions some of it, especially if it were being seeded, would demand water every 10 or 20 days, but under normal conditions a single irrigation might suffice. If a warm wind came on, there would be an immediate call to get some water down to that particular tract.

Mr. POWELL. The effect of a complete storage system would be to increase the efficiency of the stream for irrigation from 10 to 20 times?

Mr. NEWELL. It might readily do that. The idea of a storage system is similar to that of having money in the bank—you may not need it, but if water is there on call a farmer may proceed on a reasonable degree of assurance, if he can get the water down from his reservoir to the land in time.

Mr. POWELL. There are so many questions running into each other in this, and they all seem interrelated—I would like to know if it

would not be very advisable, indeed, to have a joint control of the storage in some way looking to the conservation of the water in the district.

Mr. NEWELL. As I understand it, that is practically what would take place under this arrangement. Under your direction water will be apportioned, for example, to be stored in the early spring or late winter in the reservoirs available, because otherwise the water would go to waste. During the spring floods the water would be apportioned as noted, there presumably being enough for summer purposes. Late in the season when the dry weather comes we assume the reservoirs are full, and then will be a question as to turning the water out of the reservoirs to secure the largest beneficial use. Then, if a sudden storm comes, that could be provided for. It will require men of skill and experience to take charge of such apportionment, because it may take a week or 10 days for the water to get from the reservoir at St. Marys Lake down to the lands that need it below. There is storage capacity on the Milk River, but it is a question of the economics of building reservoirs on that river. We are building one or two, but I am afraid that in other places the soil is not very well suited for holding water.

Mr. POWELL. If that be the case, you could, during the pressure of the flood season, take the waters which would otherwise go to waste and store them down there, and take your quantity in that way.

Mr. NEWELL. We may take a portion, and we probably shall. If a sudden flood comes, say to 5,000 second-feet, and drops off, and we have a capacity of only 500 second-feet, we can only have the canal full during a few hours, and the rest above 500 second-feet will go to waste. On the Milk River we have not been able to deduce any rule from the experience in the past. There may come a flood in February and perhaps there may be almost no water during the remainder of the year, or one for a few days only.

Mr. WYVILL. I might say here that we have no objection on the part of the United States to Mr. MacInnes asking Mr. Newell any question relating to engineering, but if he purposes to ask him any question relating to the legal aspect of the case we would prefer that a statement be made by me as to the United States view on this particular phase of that question. We are handicapped to some extent, coming, as we do, on the invitation of the commission and not having any orderly proceeding laid down, and if a legal discussion is going to be indulged in I would prefer that our views on the question from the legal standpoint be laid down. That does not, of course, refer to any question which the commissioner may ask, but if Mr. Newell is to be examined on the legal aspects it might be well for the benefit of the record to have an expression from the United States standpoint.

Mr. TAWNEY. Would this be satisfactory: To have the statement on behalf of the Government of the United States completed, and then call Mr. Newell for examination by the representatives of either Government?

Mr. MACINNES. I would suggest a combination of the two methods. I certainly do not propose to ask Mr. Newell as to any questions of law, or to argue any question of law with him, because I would certainly get beaten. I do not mind arguing questions of law with a

lawyer, but I do not care to argue them with a layman. I would confine any questions I am going to put to Mr. Newell to questions of fact. I would prefer, if my friend is agreeable, to ask him a few questions on certain facts which were mentioned during his statement. I think that would be of advantage on a subsequent reading of the record, so that there may be no misunderstanding as to certain facts. I do not propose, at present at any rate, to embark on any discussion as to the negotiations leading to the treaty.

Mr. TAWNEY. It is the desire of the commission to first ascertain as far as possible the facts that are material and which bear upon the legal questions that may hereafter arise. If that statement of Mr. MacInnes, representing the Dominion Government, is satisfactory, we will proceed to interrogate Mr. Newell as to the facts.

Mr. WYVELL. There is no objection to that.

Mr. GLENN. I think we could save a good deal of time if we could first ascertain how much difference there is between the views of the parties on this question. Perhaps Mr. MacInnes can say if he agrees with some of the propositions laid down by Mr. Wyvell.

Mr. MACINNES. I will continue my examination of Mr. Newell. [To Mr. Newell.] Mr. Newell, you have referred to the works of the Reclamation Service both as they exist at the present time and as they are contemplated and also as to certain works—by works I would understand canals and the like, and also to certain reservoirs at the headwaters of the St. Marys River and on the Milk River—I should be grateful if you would supplement that a little to make it clear to our side what the existing works are and what are contemplated, so far as canals are concerned.

Mr. NEWELL. The existing works built in the east consist of what we call the Dodson Dam, on lower Milk River, located at about the middle of its course, with a canal on the north side known as North Canal and a canal on the south side known as South Canal; also nearer the lower end of the river is a second dam, known as the Vandalia, with canals leading on the north and south sides. There is contemplated a third dam for what we call the Chinook system, higher up the river above the Dodson. These three dams in succession along the river's course are to distribute water on the north and south sides. To supply these canals with water, in addition to the flood waters of Milk River, we are building in St. Marys River Basin, and there is approaching completion a storage dam at Sherbourn Lake, on Swift Current Creek, a tributary of St. Marys River, the capacity of which will be 75,000 acre-feet. There is contemplated in the future a dam at the outlet of the lower St. Marys Lake which will create a reservoir of about 124,000 acre-feet. In the official reports you will find a number of references to storage in St. Marys Lake. In our first ideas we were very ambitious and contemplated a high dam, but later on, and in view of the experience gained, we have been a little more cautious about planning a high dam on the gravel and sand and clays which occur at the outlet of St. Marys Lake, so that we are still somewhat uncertain as to the capacity. We may build a reservoir on the lower St. Marys Lake. We propose to utilize the 75,000 acre-feet in Sherbourn Lake and probably the 124,000 in St. Marys Lake, making in the future, perhaps within 10 years, practically 200,000 acre-feet storage.

Mr. POWELL. The first is accessory to the second. Instead of allowing the waters to flow down the stream, you divert them by means of a canal into the lake.

Mr. NEWELL. No; we close the outlet of Sherbourn Lake and close the outlet of lower St. Mary Lake. The water from Sherbourn Lake will naturally flow down Swift Current Creek and enter the diverging canal we are building along the St. Mary River and across the divide into the head of Milk River.

Mr. MACINNES. That is a storage capacity on the St. Mary River part of about 200,000 acre-feet.

Mr. NEWELL. Yes.

Mr. MACINNES. The size of your canal I understand to be 850 second-feet?

Mr. NEWELL. Yes; that is the design; but we are building the structures about half size with the idea of enlarging them as the country develops.

Mr. MACINNES. So that at present it is completed to the extent of 425 second-feet?

Mr. NEWELL. About one-half.

Mr. MACINNES. And that, putting that into the quantity of acre-feet, would be about 25,500 acre-feet a month, while the canal has a capacity of 425 second-feet.

Mr. NEWELL. Yes; practically that; 25,000 is a good round number.

Mr. MACINNES. And when it is completed to the full extent of the 850 second-feet the quantity would be about 50,000 acre-feet a month?

Mr. NEWELL. Yes.

Mr. MACINNES. I understood you to say yesterday that the number of months would be four months. Is that right?

Mr. NEWELL. That is the irrigation season, and the amount of water delivered through that would depend on the dam in the lower river and also upon the question as to whether we build any subsidiary reservoirs down on the lower river. We are building what we call the Nelson Reservoir on the Milk River, which may be enlarged and into which we may deliver some of this water diverted from St. Mary River, so as to have it near the land, ready for use when called upon.

Mr. MACINNES. Which were the four months you spoke of during which you would carry the water across?

Mr. NEWELL. Presumably we would begin in June and continue through July, August, and September.

Mr. MACINNES. So that then your total requirement for that canal, subject to what you have just said about building the Nelson Dam, would be about 200,000 acre-feet.

Mr. NEWELL. Approximately that, under this assumption.

Mr. MACINNES. As to the reservoirs in the lower Milk River Valley, how many have been constructed and what are the possibilities there?

Mr. NEWELL. In the lower Milk River Valley, the one we have begun constructing, the Nelson, is under way, and there are others designed.

Mr. MACINNES. What is the capacity of the Nelson Reservoir?

Mr. NEWELL. I think it is 25,000 acre-feet.

Mr. MACINNES. What could it be made to hold?

Mr. NEWELL. If the ground shows that it is capable of holding water economically, the work can be raised, and possibly the capacity could be increased to 125,000 acre-feet.

Mr. MACINNES. I understood from your report that it might be increased to 141,000 acre-feet.

Mr. NEWELL. We made many different assumptions as we explored the ground.

Mr. MACINNES. It is contemplated to make it how much?

Mr. NEWELL. We will finish it up to 25,000 acre-feet and gradually enlarge it on the basis of experience gained in the loss of water, and we may ultimately raise it to 125,000 acre-feet.

Mr. MAGRATH. Where is the Nelson site?

Mr. NEWELL. The Nelson site, which is called in some of our early reports Mud Lake, is almost immediately north of and adjacent to what is called the Bowdoin Lake.

Mr. MACINNES. What is the possible capacity of the Bowdoin?

Mr. NEWELL. If we complete the Nelson Reservoir, probably that will take the place of the Bowdoin. In other words, there will not be enough water to fill both of these in ordinary years, so that one takes the place of the other.

Mr. MACINNES. What is the storage of the Dodson?

Mr. NEWELL. The Dodson storage and that at Vandalia are merely dams; they are diversion dams, not storage.

Mr. MACINNES. What about the Chain of Lakes site?

Mr. NEWELL. That is up the river from the works proposed and below the international boundary, where the Milk River crosses at the eastern crossing. It is in a valley, parallel with the river, the outlet of which we have explored and found to consist largely of sand, and it is very doubtful, under present knowledge, that we will attempt to place a dam there; it is possible, although not very probable.

Mr. MACINNES. What would you say the capacity would be there?

Mr. NEWELL. From 150,000 to 250,000 acre-feet if the dam site is found feasible.

Mr. MACINNES. What would be the capacity of the Bowdoin in acre-feet?

Mr. NEWELL. That would be 100,000 acre-feet or so; but, as I have said, it is taken up by the Nelson site instead.

Mr. MACINNES. Under your present scheme?

Mr. NEWELL. Yes.

Mr. MACINNES. But it could be taken up as an engineering possibility?

Mr. NEWELL. There would not be water enough, as I say, to build both. The capacity of canals that could be built is limited as to the inlet, so that one would take the place of the other.

Mr. MACINNES. What is the lowest point on the Milk River where you divert the water?

Mr. NEWELL. We divert the water last at the Vandalia site.

Mr. MACINNES. How far above the mouth is that?

Mr. NEWELL. About 40 miles, I think, above the mouth of the river.

Mr. MACINNES. What is the mean annual flow in acre-feet of the Milk River between Vandalia and the mouth?

Mr. NEWELL. That I can not say; I am not sure whether we made measurements at that point. I think there is nothing below Hinsdale.

Mr. MACINNES. I understood that our engineers had it figured out from your details that the mean flow would be about 70,000 acre-feet during the year.

Mr. NEWELL. I can not speak as to that; I do not remember seeing any figures for that.

Mr. MACINNES. You figured on the Milk River down to Vandalia?

Mr. NEWELL. That is our lowest point of diversion at the present time.

Mr. MACINNES. What will be the method of sending the water from the St. Mary River down to the lower Milk River? What percentage, for instance, will be sent down each month?

Mr. NEWELL. That must depend on climatic conditions. The theory I have had personally is that we would have the storage filled in St. Mary by the time the irrigation season begins. If the Milk River at other times happens to be in flood or there is good precipitation, we will not turn over any water until possibly August or September.

Mr. MACINNES. You will not send any water from the St. Mary River down?

Mr. NEWELL. There will be no need of it, because there will be no irrigation required, assuming it is raining and the Milk River is in flood.

Mr. MACINNES. What will be the condition of your reservoirs in the lower Milk River Valley?

Mr. NEWELL. We would endeavor to fill them during the winter floods or the occasional floods that may come during the fall and early spring.

Mr. MACINNES. Would you fill them with Milk River water?

Mr. NEWELL. As far as practicable. If it were a dry season and the lower river lands were demanding water, we would probably turn water out to meet these local demands at any time they were made. If, however, a sudden flood or rainstorm should come, we would immediately shut the gates and hold back the water until it was demanded.

Mr. MACINNES. How are the requirements of irrigable land in the lower Milk River Valley divided according to months?

Mr. NEWELL. That is exceedingly irregular. Of course, we can have some averages, but in that case averages are deceptive, because no one year approaches an average condition. In some years there is a large demand for water to get the crops started in April and May, while in other years there is ample rainfall and the greatest demand is later on in the year. I do not carry in mind the averages as to the demand, but I want to emphasize here that conclusions based on the averages of river flow and demand for water are fallacious, because we never have an average year, and each year must be judged according to its conditions and not according to averages.

Mr. MACINNES. Taking the duty of water at a certain figure, what would you say the duty of water is for these lands in the lower Milk River Valley?

Mr. NEWELL. The people of the valley have asserted that if they could be sure of 1 foot of water during a season they could raise a good crop.

Mr. MACINNES. That is, 1 acre-foot?

Mr. NEWELL. One acre-foot per acre. Our experience is, however, that when we have an ample supply there is a very insistent demand for double that amount. In other words, while a man theoretically could get along with it, practically they need 1, 2, and 3 acre-feet to meet the exigencies.

Mr. MACINNES. But to give more than is required for the land is very bad practice, is it not?

Mr. NEWELL. Bad practice, and often injurious.

Mr. MACINNES. Your reports set that forth very fully from time to time.

Mr. NEWELL. And very emphatically.

Mr. GLENN. It drowns the land.

Mr. NEWELL. It not only drowns the land and makes it heavy and sour, but it brings alkali to the surface, and until that is washed out again the land is practically useless.

Mr. MACINNES. Take one foot and a half per acre foot during the irrigation season in this district, as well as you can form an opinion from the information you have, would a foot and a half to be divided up during the irrigation months be sufficient?

Mr. NEWELL. I think it would be very unwise to adopt any rule or to consider it in that way, because that is a demand not based on averages but on actual need, and we must make provision so that we would have perhaps 25 or 30 per cent more in a month of drought. I want to warn the gentlemen present that any of these averages are very fallacious and very misleading.

Mr. POWELL. You think that the matter must be dealt with for each individual year?

Mr. NEWELL. No year will ever occur in which you will use an average amount of water.

Mr. MACINNES. I was speaking of what the land would require on an average; how much of that one foot and a half would be taken during May, June, July, and August?

Mr. NEWELL. Practically the greater part of it might be used in one irrigation if it were a very dry year.

Mr. MACINNES. What do the records say as to that?

Mr. NEWELL. The records vary from 25 to 40 per cent.

Mr. MACINNES. In a month?

Mr. NEWELL. In any one month.

Mr. MACINNES. I suppose a table could be prepared as to that from past experiences.

Mr. NEWELL. We have prepared tables, working on averages for different years, but in preparing these we have always been extremely careful to note that it would be very fallacious if it were attempted to adopt these as a rule.

Mr. MACINNES. I see that was the way apparently in which the difficulty between the United States and Mexico with regard to an equitable distribution of the waters of the Rio Grande for irrigation purposes was arranged.

Mr. NEWELL. I am very glad you brought that out, because each proposition of this kind has different conditions and results and one may be misled by comparing one with the other.

Mr. MACINNES. I appreciate that.

Mr. NEWELL. Mexico is a dry country and there is no liability of rainfall during the irrigation season, so that there we could adopt a somewhat arbitrary rule because we knew there would be no rain during these months, and we worked out a rule which we hope will be adequate. We also provided so that we could give them more in one month than this ratio.

Mr. MACINNES. One can quite understand that any average might not necessarily be the proportion necessary in any particular year, but I understood you had prepared percentages from past experiences.

Mr. NEWELL. I do not understand that we have prepared such percentages for the semiarid regions where there is likely to be rain.

Mr. MACINNES. Of course it could be deduced from the figures which are available.

Mr. NEWELL. Yes; it could be.

Mr. MACINNES. This water of the Milk River is used of course upon the lands in the lower Milk River Valley?

Mr. NEWELL. Yes.

Mr. MACINNES. The water in the lower Milk River Valley is not taken anywhere else?

Mr. NEWELL. No; it is used in the comparatively narrow tract of land on both sides of the river.

Mr. MACINNES. You told us that the irrigable area which is to be irrigated with the part of the waters of the St. Mary River under your scheme and with all these waters of the Milk River Valley is approximately 220,000 acres.

Mr. NEWELL. That is our present plan.

Mr. MACINNES. Do you suggest in any way—because it would be news to me if it is so—that that amount could be increased?

Mr. NEWELL. I doubt whether we could get enough water to increase it notably, unless we get a very greatly increased duty from economy of water in its use.

Mr. MACINNES. Apart altogether from that, where could you get the land?

Mr. NEWELL. There is plenty of land along the river.

Mr. MACINNES. Plenty of land; yes. But where is the land that could be irrigated?—because, according to your report, I understood you had investigated that, and it is stated that your irrigable area is 219,000 acres.

Mr. NEWELL. Yes; that is the land we have covered under the present compilation.

Mr. MACINNES. Quite so; but where, if at all, is there any additional land that could be added to the irrigable area.

Mr. NEWELL. By extending the canals on the present grade farther easterly to cover higher and higher ground.

Mr. MACINNES. Which would involve, of course, higher and higher expense?

Mr. NEWELL. Yes.

Mr. MACINNES. But in your reports up to date it is not suggested that there will be a larger amount than 219,000 acres.

Mr. NEWELL. That is limited by the economic conditions and the water.

Mr. MACINNES. You spoke about the existing water appropriations in Montana; those were made up, as I remember, in your report, by the requirements of certain companies on the Milk River, and some on the tributaries of the Milk River, and my understanding is that an agreement was made between the Reclamation Service and these companies under which you undertook to provide the water for their projects.

Mr. NEWELL. Yes; there is an agreement with the larger irrigating canal companies.

Mr. MACINNES. Reading from your seventh annual report, that agreement appears to have been dated 8th May, 1908. Is that correct?

Mr. NEWELL. I think that is correct.

Mr. MACINNES. And the details with regard to these companies and their requirements are, I presume, correctly set out in that Seventh Annual Report of the Reclamation Service at pages 108 and 109?

Mr. NEWELL. Yes.

Mr. MACINNES. Dealing with the Milk River—are there any claimants outside of these projects which you took over?

Mr. NEWELL. Yes; there are claimants. The agreement with the company included only the principal large canals with which we probably would have dealings. We did not refer to any of the individuals directly or indirectly affected.

Mr. MACINNES. What do you mean by "affected"? These individuals would be taking from the canal system?

Mr. NEWELL. Not necessarily; they might take directly from the river.

Mr. MACINNES. What other claimants are there on the Milk River proper, outside of the Reclamation Service, that have to be considered in this matter?

Mr. NEWELL. There are first, any claimants who may have built shorter canals and who have never put the matter on record that these canals have been built. They would claim under Montana laws as having completed and put the water to use. There are others who have filed under Montana law, and of whom we have record. That is, the United States has claimed any additional water which is not already claimed by these prior appropriations.

Mr. MACINNES. You put in a general claim?

Mr. NEWELL. Yes; and there are constantly being received in the General Land Office additional applications for desert lands whose requirements depend on diverting water from the river or its tributaries, so that the matter is an extremely complicated one. We have endeavored so far as we can to ascertain the aggregate of these claims and we have them in 10 large volumes. It is almost impossible to tell where these claims begin or end.

Mr. MACINNES. From what was said at Washington, I understood that what was contained in these 10 large volumes was with regard to the feeders.

Mr. NEWELL. Both the feeders and the river itself. The diversion of water from the feeders would take it out of the main river to a corresponding extent.

Mr. MACINNES. From the memorandum sent to us by Mr. Conner, I gather that what had to be considered outside of your project amounted to 500 acre-feet only on the Milk River proper; can you tell us as to that?

Mr. NEWELL. No.

Mr. MACINNES. While it may have the appearance of being involved in great possibilities, as a matter of fact there is no serious probability on the Milk River proper of any claim other than your own.

Mr. NEWELL. We have endeavored to ascertain and consolidate the larger claims and let the smaller ones take care of themselves.

Mr. MACINNES. You are not troubling with the smaller claims?

Mr. NEWELL. We are not now considering them.

Mr. MACINNES. Can any one give us an estimate of what they amount to?

Mr. NEWELL. I have no doubt that Mr. Conner could; I am informed it is about 15 second-feet outside the large canals.

Mr. MACINNES. You spoke as to gauging stations and you mentioned four new stations which have been erected. Those are, of course, exclusive of stations which had been erected in both countries at different points on the river system?

Mr. NEWELL. Yes; those are the ones in which we were particularly interested and to which I have given most thought.

Mr. MACINNES. You seem to lay some stress on these four stations in 1912; are you aware of the manner in which they were established?

Mr. NEWELL. I do not recollect of any particular manner.

Mr. MACINNES. It appears from the correspondence on the matter—I would like to know if you have any doubt on the subject—that with regard to these four stations established in 1912, these four stations are as follows: One on St. Marys River, one on the North Arm of the Milk River, one on the South Fork of the Milk River, and one on the Eastern Crossing of the Milk River. At all of these points, with the exception of the Eastern Crossing of the Milk River, there was already in existence I understand a gauging station by each country, the stations being within a short distance of each other.

Mr. NEWELL. I do not recall that, but we were particularly interested in getting a measurement at these points where the river crossed the boundary.

Mr. MACINNES. And there was already in existence a station by each country on its own side of the boundary, within a short distance of the other station?

Mr. NEWELL. That may be so. I do not recall it.

Mr. MACINNES. I have here a letter from Mr. George Otis Smith, whom I understand is the head of the United States Geological Survey, and writing to Mr. Peters, January, 1912, which seems to be the commencement of this matter, he says:

As the records of the two stations are practically the same, I believe that a cooperative arrangement for the maintenance of a single station to take the place of the two stations would lead to the advantage of your department and the United States Geological Survey.

The same situation existed with regard to the second station, on the North Branch and South Branch of the Milk River. The only station that could in any way be called a new station was the one at the eastern crossing of the Milk, on which there was already a Canadian gauging station. So that seems to have been the state of facts under which these four new stations were created. I did not know whether you were seeking to suggest that these were the only four joint stations that would be necessary, or that they had been erected for some new purpose or something of that kind. I did not quite follow the intent of your evidence on that.

Mr. NEWELL. What I said was concerned with these four stations; but, in addition, I think the International Joint Commission should establish other stations, particularly stations on the rivers which flow from Canada into the United States, such as the Frenchman River and others, so that we will have a complete record of the water which does pass over the boundary.

Mr. MACINNES. In any event, regardless of any question between us, you think there should be these stations which I have referred to?

Mr. NEWELL. Certainly; I regard these as of the utmost importance. Of course, others could be established at other points.

Mr. MACINNES. In any event, the station on the eastern crossing of the Milk River would be desirable for measuring the flow, or the amount of water let into the Milk River or the St. Mary in the United States?

Mr. NEWELL. Yes; we should have a continuous record from the time the water enters the canal in the United States until it returns into the Milk River Valley in Montana, so as to know what has become of the water.

Mr. POWELL. Is there much variation in the precipitation from year to year?

Mr. NEWELL. A great variation, as in the case of all semiarid countries. The range from year to year is extraordinary, so that in some years there may be almost complete drought and in other years a heavy rainfall, and the appearance of the vegetation would be like that in a humid country.

Mr. POWELL. What references have you on that question?

Mr. NEWELL. It is published in the meteorological records of both countries, and we appeal to that. It is there in tabular form, and we did not attempt to collect any additional information from that collected by the Governments themselves.

Mr. MACINNES. What rights has the Reclamation Service acquired in the St. Mary and Milk Rivers and their tributaries in the State of Montana? Have these rights been acquired in accordance with the provisions of the State water laws? In the first place, tell me, where are these filings made, and how long do you think these rights will be protected by the State of Montana against subsequent applications?

Mr. NEWELL. These are involved legal questions and I would ask that Mr. Bien may answer them, because they appertain to the legal situation.

Mr. MACINNES. Quite so. On the question of fact as to what water rights you have acquired I refer to the Seventh Annual Report of the Reclamation Service, and I see that I have here an extract which it may be more convenient to put straight in the record if you will be good enough to look at it and see that it is correct.

Mr. NEWELL. So far as I can recall, that is a correct extract from the report, but I have not seen it for some years; I believe it is substantially what is contained in the report. The following is the report referred to:

In the seventh annual report, pages 108 and 109, this feature "Adjustment of water rights" is considered at length and the following excerpts are made.

At the time authority was given, in March, 1908, for construction work on this project it was understood that a general adjudication of the rights of all private canals would be necessary in order to determine the order of their priorities, but more especially to establish the amount of water to which each ditch was entitled. In order to avoid the expense and delay that would necessarily result from an adjudication of these rights by suits at law, as well as to expedite the construction of the Dodson system, certain articles of agreement were drawn under date of May 28, 1908, between various private canal companies in the vicinity of Chinook and Harlem, parties of the first part, the Upper and Lower Milk River Water Users' Associations, parties of the second part, and the United States, party of the third part. This agreement provides in effect that as soon as an adequate supply of water shall be provided in the channel of Milk River from St. Mary River or elsewhere the owners of the various private canals will execute and deliver to the United States conveyance of their present water rights, dams, ditches, reservoirs, and structures covering lands in the Milk River Valley susceptible of irrigation from the proposed Government irrigation systems. * * * The agreement further provides that the present appropriations of the ditch owners shall be measured by the maximum capacities of their ditches as estimated in the following table, and that the acreage hitherto irrigated shall be considered those shown on the table.

| Company. | Canal capa. by. | Irrigated. |
|--|--------------------|---------------|
| | <i>Sec.-ft.</i> | <i>Acres.</i> |
| Fort Belknap Canal & Irrigation Co..... | 130 | 10,900 |
| Winters, Anderson Ditch Co..... | 12 | 440 |
| Paradise Valley Ditch & Irrigation Co..... | 19 | 1,400 |
| New Harlem Irrigation Co..... | 73 | 7,820 |
| Cooks Irrigation Co..... | 50 | 2,700 |
| Matthewson Ditch Co..... | 28 | 1,715 |
| West Fork Ditch Co..... | 13 | 800 |
| Fort Belknap Indian Canal..... | 125 | ..... |
| Total..... | 450 | 25,755 |

Of that total quantity of 450 second-feet the first four and the last-named ditch only draw water directly from Milk River; the others, in a total quantity of 91 second-feet, draw from tributaries, leaving 359 second-feet only, as prior appropriations from Milk River.

Mr. MACINNES. What can you tell us, Mr. Newell, with regard to the situation of the tributaries of the Milk River to the east: Battle Creek, Lodge Creek, and Frenchman Creek?

Mr. NEWELL. What I can tell you there is wholly from hearsay, because I have not personally been over these streams to any considerable extent. That question might be asked of Mr. Conner or some of our men who have been there.

Mr. MACINNES. What can you tell us as to claims on these tributaries other than the one by the Reclamation Service? Is that a matter I had better ask Mr. Conner about?

Mr. NEWELL. I think so; I have not gone into that question, personally.

Mr. MACINNES. One of your suggestions was that the officials appointed by the Government should make recommendations for

more measuring stations. Is that a matter which would not be dealt with now before this commission?

Mr. NEWELL. My thought in making that suggestion was this: The executive work of the International Joint Commission in this matter is involved and difficult. It depends largely on individual judgment and experience, and that as soon as these men are appointed they naturally will have more or less knowledge of it, but they will desire to have more knowledge still, and their recommendations, from my standpoint, would be more valuable to the commission than any we could agree upon here at present, although that is not an important recommendation; it is simply in the course of the ordinary procedure.

Mr. MACINNES. I suppose they could go on record here as to what they thought it wise to recommend.

Mr. NEWELL. We could do that on both sides. We are doing this largely on hearsay, because no one of us has been over the entire situation very fully.

Mr. MACINNES. Is it suggested on your side that new gauging stations or the now-existing gauging stations should be made joint?

Mr. NEWELL. I think they should be made joint, especially those at the international boundary.

Mr. MACINNES. What about the other points?

Mr. NEWELL. For myself I think we could safely say that the measurements made by the Canadian authorities on their side would be accepted by us in the same way that the measurements made on our side would be unreservedly accepted by them. Of course, that is simply a suggestion of mine.

Mr. MACINNES. And it would be subject, in the event of dispute, to verification in the proper manner?

Mr. NEWELL. Yes.

Mr. MACINNES. That is your present view, is it?

Mr. NEWELL. That is my present view.

Mr. MACINNES. Although, if it were thought wise to have any additional joint stations, so that there might be no possibility of dispute, you would not object?

Mr. NEWELL. Not at all; that would be, as I understand it, left wholly to the International Joint Commission.

Mr. MACINNES. You made a suggestion, Mr. Newell, in the closing part of your statement, as to a survey of irrigable land; what is intended to be covered by that?

Mr. NEWELL. Simply to supplement the information, which we have now in rather a general form, and to answer that question which was brought up by one of the commissioners, as to what we knew about the flow of the rivers, the lands which would be irrigated, and other information. I suggest our present information on that should be collated and amplified by the agents of the commission from time to time, as necessity arose.

Mr. MACINNES. I would think that might involve large expense. Could both sides put in the information they have already, and then it could be decided by the commission, or other competent body, as to whether any additional work and expense was necessary.

Mr. NEWELL. Yes; that is my idea; namely, that these representatives of the commission would gather together all this information, each from his own country, and then, if it were deemed necessary to

supplement it, to prepare a budget for that expenditure, and the International Joint Commission would then see to it that that work was done if they considered it necessary.

Mr. MACINNES. But first to collate existing information, rather than to go out and get new information, which might be in existence already.

Mr. NEWELL. Oh, certainly, it is assumed they would not repeat any result already available.

Mr. MACINNES. On that point, I may say that we shall be able to give to the commission a very large amount of information, but you might, perhaps, have a different view of the subject as to what is required.

Mr. NEWELL. Undoubtedly, men will have a different view of it.

Questioned by Mr. WYVELL:

Mr. WYVELL. Mr. Newell, you spoke of several reservoirs in the lower Milk River Valley; you mean that most of them are within the range of possibility?

Mr. NEWELL. They are within the range of possibility.

Mr. WYVELL. As to the actual plans which will in all probability be consummated, only one reservoir will be built?

Mr. NEWELL. Under the present plans; yes. I might explain for the record, that up to the last year the reclamation fund has been at the disposal of the Secretary of the Interior, and he could make his plans reaching forward indefinitely. But under recent legislation the reclamation fund is made available only by annual action of Congress, so that the Secretary of the Interior can plan ahead only for one year at a time, and therefore his intention may be, or the intention of the authorities may be, changed from year to year by action of Congress or by a change of the executive itself.

Mr. TAWNEY. That relates only to the appropriation of the money available for reclamation purposes; it does not change the law with respect to the Secretary of the Interior authorizing the work.

Mr. NEWELL. The Secretary recommends it to Congress and Congress authorizes it.

Mr. TAWNEY. I know, but he makes an estimate of the amount of money he will need for the next fiscal year and Congress gives or withholds the amount estimated for. The authority under the requirements of the law vested in the Secretary of the Interior to make plans is not affected at all by this change in the matter of making the money available for carrying out the plans, as I understand it.

Mr. NEWELL. That is correct.

Mr. WYVELL. What reservoir is planned to be constructed in the immediate future?

Mr. NEWELL. The so-called Nelson Reservoir is the one which is being constructed now.

Mr. WYVELL. How much storage will that provide?

Mr. NEWELL. 25,000 acre-feet.

Mr. WYVELL. And the extension to 75,000 or 100,000 will not take place for how long?

Mr. NEWELL. Depending upon the success. If the present reservoir holds water, and the soil is found to be of such a character as

to justify it, we can greatly increase the storage during the next 5 or 10 years.

Mr. WYVELL. In other words, you are planning to give the reservoir a practical test with its capacity of about 25,000 acre-feet before extending it?

Mr. NEWELL. Yes.

Mr. WYVELL. And the question of expansion will depend upon the success with which the reservoir holds the water.

Mr. NEWELL. Yes.

Mr. WYVELL. Mr. MacInnes brought out something about the canal which will permit some 400 second-feet to be diverted from the St. Mary to the Milk River, and I wish you would explain in detail, with such knowledge as you have, about what proportion would actually be passed during the irrigation season, bearing in mind your suggestion that it would be dependent largely on the physical conditions of the district.

Mr. NEWELL. The theory that I have had, and which would be put into practical effect by the representatives of the commission, would be to begin to feed into the Milk River Valley as early in the year as possible enough water to fill the lower Nelson Reservoir, if it was not filled by the Milk River floods. Then, as the season advances, if it is wet there would be little water passed over the divide. In a dry season in the lower valley probably the canal would be run to nearly its full capacity, subject to fluctuation in accordance with the rainfall and the demands of the farmers in irrigating their crops and in wetting the ground for the plow.

Mr. MAGRATH. When would you anticipate to open that canal, in the spring?

Mr. NEWELL. It depends on when the snow is off of the ground, but I suppose we could begin to get water over possible in March or in April. If it is an open winter we could possibly run even earlier than that.

Mr. WYVELL. So that in the course of four months 400 second-feet would not be passing all the time?

Mr. NEWELL. That would be a very exceptional condition, of running the canal full steadily. My thought would be that it would run full for a few days a week, and then it could be reduced and increased again.

Mr. WYVELL. If the person who had control of the letting of the water into the canal received word from the Milk River Valley in the summer that there had been a rainfall he would stop the canal immediately.

Mr. NEWELL. Immediately; yes.

Mr. WYVELL. And if there had been a small rainfall you could stop it to a smaller extent. In other words, you would work the thing on a practical basis as the needs of the country to be irrigated demanded, so that while the capacity would be 25,000 acre-feet per month for four months there would not, of course, arise any such contingency which would require that 400 second-feet to flow.

Mr. NEWELL. I have not imagined any such contingency. It is imaginable, but our experience in handling canals shows that we very rarely have full flow.

Mr. WYVELL. Will you please explain in your own words again the condition in the lower Milk River Valley with regard to the

amount of land to be irrigated? Mr. MacInnes seems to suggest that there were only some 200,000 acres of land that could possibly be irrigated. As a matter of fact, there are many millions of acres of land in the valley, are there not?

Mr. NEWELL. The possibilities are large, and the demand may exceed the water supply probably available, as shown by practical experience. By these dams across the river and extension of canals the irrigated area may be continued almost indefinitely as water is made available and as the lands are used. While we have said 225,000 acres, that is merely an expression of opinion, and there will be a large amount of land which may ultimately be irrigated.

Mr. MAGRATH. Are you speaking of lands within the Milk River Valley?

Mr. NEWELL. Yes.

Mr. MAGRATH. What is the length of the valley?

Mr. NEWELL. My recollection is that it is about 300 miles.

Mr. MAGRATH. And how wide?

Mr. NEWELL. It averages from 2 to 5 miles, roughly.

Mr. WYVELL. Is the population actually increasing in that country? Assuming that the price of farm lands would rise, it would be possible to irrigate some of these other lands at a profit, based upon the future value of the land.

Mr. NEWELL. That has been our theory. We consider that as land values and stock values increase there will be improvement, and there will be methods of irrigation adopted which to-day we regard as impracticable. That is the history of a country of that kind.

Mr. WYVELL. In other words, you first irrigate the lands which are easiest and cheapest to irrigate?

Mr. NEWELL. Yes.

Mr. WYVELL. And then as a second proposition you take the lands which are more difficult to irrigate?

Mr. NEWELL. That is substantially it.

Mr. WYVELL. I want to make it clear to the commission about these reservoirs in the lower Milk River Valley; it is not contemplated building any more reservoirs until after the Nelson Reservoir has been given a fair trial, even at its suggested capacity.

Mr. NEWELL. We must demonstrate its success at 25,000 feet, and then we must go to Congress and ask for money to enlarge it to, say, 125,000 feet. That will probably be a matter of a number of years, because we must show the importance to the country and then convince Congress that the expenditure should be made in that particular place.

Mr. WYVELL. And the present developments of the country would not warrant the establishment of any reservoir other than the Nelson Reservoir within the next 10 years.

Mr. NEWELL. Not in the near future.

Mr. MACINNES. Have you a map showing the irrigable area of 220,000 acres?

Mr. NEWELL. Yes.

(Map produced.)

Mr. WYVELL. As I understand it, the only suggestion that the Reclamation Service has to offer the commission at this time, with regard to international gauging stations, is that they be established

on three of the important tributaries that flow from Saskatchewan to the St. Mary.

Mr. NEWELL. That is my theory.

Mr. WYVELL. That is the only suggestion you have to make?

Mr. NEWELL. Yes.

Mr. TAWNEY. If any gentleman representing the State of Montana or the Provinces of Saskatchewan and Alberta, or if any gentlemen representing private interests desire to ask Mr. Newell any questions bearing on this matter, he will be ready to answer them now.

Mr. KELLY (attorney general of Montana). For the information of the commission, I would like to have Mr. Newell enlarge upon the proposition of the economic reclamation of land as it now exists, as it has existed, say, for the last 10 or 20 years, and as it may exist 10 or 20 years hence. In other words, Mr. MacInnes, representing the Canadian Government, brought out the idea that from the economic standpoint now it was possible only to irrigate about 220,000 acres in the Milk River Valley. I would suggest that Mr. Newell should enlarge upon that from the standpoint that 20 years ago what was considered out of the question is now being done, and that 20 years or 40 years in the future it is possible that it will be just as economic to irrigate the entire Milk River Valley as it would be now to irrigate this quantity which has been mentioned.

I would state that when the reclamation act was passed in 1902 we had pretty clearly in mind that it would not pay to irrigate land at a higher cost than \$20 an acre. Since that our ideas have expanded, and we have actually built canals—not in Montana, but in States to the west—that have cost upward of \$100 an acre. What may happen in the next 10 or 20 years we are sufficiently optimistic to form our own conclusions upon; but with the increased population and increased value of lands in the last 10 years, should it continue for the next 10 years, we may argue that 10 or 20 years hence water will be stored and diverted to lands at a cost of several times that which would be regarded economically feasible at the present date. It is for you, gentlemen, to use you own imagination on that; I do not need to enlarge upon that.

(The commission took recess for luncheon.)

AFTER RECESS.

The commission reconvened at the expiration of the recess, all the members being present.

Mr. TAWNEY. Gentlemen, we will now proceed. If there are any others here who desire to ask Mr. Newell any questions for the purpose of eliciting further information on this subject, they will be given an opportunity to do so now. If not, Mr. Wyvell can proceed.

Mr. WYVELL. If the commission please, Mr. Kelly, the attorney general of Montana, has to leave to-night. I would suggest that he be invited to state now what he has to say on the subject.

Mr. TAWNEY. Very well, Mr. Kelly, the commission would be glad to hear you at this time.

STATEMENT OF D. M. KELLY, ATTORNEY GENERAL OF THE STATE OF MONTANA, HELENA, MONT.

Mr. KELLY. Gentlemen, I have not a thing to say, except to advise the commission that I have gone over the matter with Mr. Wyvell, representing the Government of the United States, Mr. Newell, and the other gentlemen here who represent the State of Montana, and our views coincide. Since it is necessary for me to go home this evening, I felt it proper that I should advise the commission that I would not be here longer, and if there is anything from the standpoint of the commission that you want to inquire of from either myself or Mr. Mahon, the State engineer, we would be glad to have you do so this afternoon.

Mr. TAWNEY. Have you any data showing the claims that are filed in your State for water rights?

Mr. KELLY. No; and Mr. Mahon has not that data, either. Mr. Mahon has very complete records in his office of the water locations and water measurements in Montana purely from a local standpoint and not relating to these rivers, however.

Mr. TAWNEY. Have you any statutes with you governing the rights of the citizens of Montana to the use of the water?

Mr. KELLY. I have not them with me, but you can no doubt find them in the library here at the State capitol.

Mr. TAWNEY. You have no citations from your particular statutes, have you?

Mr. KELLY. No. It is not my view, however, that purely local water rights have any bearing on this hearing, so I did not come with that idea in view. After the water crosses the line into Canada or into Montana it then becomes a local question as to its distribution in the States.

Mr. MIGNAULT. Have you any data as to claims made in Montana in connection with the waters of the Milk and St. Mary Rivers?

Mr. KELLY. No.

Mr. POWELL. Mr. Kelly, there is an expression that I am afraid, not being familiar with the legislation, I did not take the full sense of, "prior appropriation." Is that used in your statute?

Mr. KELLY. That is used in the statutes and continually in water decisions by our courts.

Mr. POWELL. So we may regard it as a technical expression?

Mr. KELLY. Yes; it has a very well defined meaning from the standpoint of the western lawyer.

Mr. POWELL. What is the meaning?

Mr. KELLY. The first appropriator of water, his priority gives him a priority of right. In other words, the Western States do not recognize riparian rights. A man may go above another on a stream and appropriate all the water that is in the stream, and by virtue of the fact that another party has land below it does not give him any right to have the water flow by his land. That is a western doctrine recognized by necessity. Priority of location means not only the location on the stream, but the actual application of the water to the beneficial use on the land.

Mr. POWELL. Then, it is doing away with the old common law by which the riparian appropriator downstream is entitled to the flow undisturbed in quantity and quality?

Mr. KELLY. Yes, sir.

Mr. MIGNAULT. What statute do you consider in Montana as constituting a priority?

Mr. KELLY. The statute defines how a location may be made; that is, by posting a location at the point of diversion and recording it and the commencement of construction within a certain number of days and the completion of the system with reasonable speed, as well as the actual application of water to beneficial use. A man gets no right to the water at all, but only to the use of it. When he does not use it, it must be allowed to go down the stream to the other man.

Mr. MIGNAULT. The water must be applied to beneficial use?

Mr. KELLY. Yes; you get no right to the water at all, but rather a right to use it.

Mr. POWELL. At common law, of course, a riparian proprietor would have the use for domestic purposes and also for purposes of watering his cattle and all other incidental farm uses. As I understand you, that is a statutory extension of the common-law right vesting in the riparian proprietor as an antecedent to the land?

Mr. KELLY. Yes.

Mr. MACINNES. May I ask, Mr. Kelly, whether the laws of Montana on the subject of irrigation are compiled? Has Mr. Mahon a copy?

Mr. KELLY. I presume you would find them in the report of the State engineer. I will have a copy of that report forwarded to you. You will find them, however, in one chapter of the statutes, so they can be referred to and incorporated in the record, if you desire.

Mr. TAWNEY. We have the Montana statutes here in the library in this building, have we not, Mr. Kelly?

Mr. KELLY. I do not know. I will make an inquiry regarding it.

Mr. TAWNEY. The library of the court of appeals is here. Is Montana in the eighth circuit?

Mr. KELLY. No; we are in the seventh district.

Mr. POWELL. Have you a publication of them as a consolidation?

Mr. KELLY. They are in one chapter in the consolidation of the Revised Statutes of 1907.

Mr. POWELL. You had better send a copy of that chapter to the secretary at Ottawa. I do not think we have it there.

Mr. KELLY. I will arrange to do that as soon as I get home.

Mr. MIGNAULT. Mr. Kelly, does your statute prevail against an act of Congress?

Mr. KELLY. As to water rights within Montana it does; that is, between private interests within the State.

Mr. TAWNEY. I understand, Mr. Kelly, that the commission has a full set of the statutes of Montana in its office at Ottawa.

Mr. WYVELL. Mr. Kelly, you have already explained with great clearness the importance of the beneficial use—that is, the actual application of the waters to the land—and how the administrative officers of Montana and the courts deal with persons who claim to have beneficial use where it appears that they have not actually, in fact, applied the waters. Will you kindly explain what is generally done in those cases?

Mr. KELLY. Of course, water rights between private parties are adjusted by decrees of court based upon proof. On a small stream there might be 15, 20, or 30 different farmers. Some actually might have joint canals and others would have their own individual canals. In presenting proof each side or each individual interest is represented and presents proof of the date of the location. In the early days of the history of water rights we did not have statutes governing the acquiring of rights. The court recognized the rights of priority even before statutes were passed in the Western States. A man presents proof not only as to the date of his appropriation—when he got his canal constructed—but also as to the amount of water which he uses. That is generally based upon the acreage actually irrigated, together with physical conditions, which determine how many second-feet of water he needs for his particular tract of land. The court will then enter a decree giving John Jones 100 second-feet of water or 500 second-feet of water as of date of 1865. Dick Smith gets 200 second-feet as of 1875, and so forth on down. Now, then, the man with the oldest right has a right to use all of the water in the stream up to the amount of his allowance by the decree of court. He has the first right to the water. Although he is lower down on the stream, he can require the other fellow who came in later to let down water to give him the extent of his allowance. After a decree is entered out there the law authorizes the court to appoint a water commissioner for the season. That commissioner is furnished with a copy of the decree and with instructions from the court to deliver the water to the various parties according to the decree. If Bill Smith has the prior right to the use of 100 inches of water and he is not using it this week—he is cutting his alfalfa and not irrigating—he is compelled to run that water downstream, so that the other men may use it. In other words, he has not any right to the water by virtue of the fact that he gets a prior right to it in a decree, except as to the use of it. A man does not get any right to the water at all. He simply has a right to use it, and when he is not using it the other fellow's right comes in according to his date of priority and date of appropriation. That is the statute law in Montana.

Mr. POWELL. But at common law there is no right of property in the water itself?

Mr. KELLY. No; that is true.

Mr. MIGNAULT. You say it was by custom first, and then the custom was recognized by statute?

Mr. KELLY. Yes. The courts in the early days in Colorado and California recognized that riparian rights were not applicable in an arid country where irrigation was necessary, and that irrigation rights must be recognized.

Mr. WYVELL. Does the court sit in equity in considering these things or with a jury?

Mr. KELLY. They generally try them without a jury. The parties have not a right to a jury. Sometimes a court may call a jury to make special findings as to facts, but they are not binding upon the court.

Mr. WYVELL. Assuming that a man claims 25 second-feet; that some man who is later in time and would be entitled to that water if he were using it claims 15 second-feet; and that they go into court

and the preponderance of proof is that the man claiming 25 second-feet is using only 5, the court would, of course, compel him to give up his right and actually allow the water to flow to the next man?

Mr. KELLY. Yes; and the decree would fix his right not to 25 second-feet, but rather to 5, if that were all to apply to beneficial use. The court would give him just exactly what he had applied, although his record might show an appropriation of 25 feet. If he actually does not take the water out of the river and does not use it on the land, he does not acquire any right.

Mr. MIGNAULT. The decree would give him the maximum amount which he ever applied to beneficial use?

Mr. KELLY. Yes, sir.

Mr. WYVELL. Not the maximum amount.

Mr. MIGNAULT. I understand Mr. Kelly to say that if he can show that in the past he has applied a larger quantity, then the decree would recognize his right to the larger quantity. I may be mistaken, but that was my understanding.

Mr. KELLY. If I get your point, a man might in 1913 be irrigating a section of land. In 1915 if he did not plant that land, he would not lose his water right because he did not use it that particular year. He gets as much water as he has actually acquired by applying it to beneficial use.

Mr. WYVELL. But in the year that he is not applying it to beneficial use he must allow it to go by to the next person.

Mr. KELLY. Yes.

Mr. WYVELL. So that the words "beneficial use," so to speak, are the important consideration which the courts are always considering.

Mr. KELLY. It is the test of a man's water rights always.

Mr. WYVELL. And that is the limit of his rights?

Mr. KELLY. Yes.

Mr. MACINNES. Mr. Chairman, if I may in the same way ask the indulgence of the commission, I would like to call Mr. Mantle, the deputy minister of agriculture, of the Province of Saskatchewan. The Saskatchewan Legislature is in session at the present time, the minister of agriculture is on the sick list, and it is very important that Mr. Mantle should return to Regina this afternoon.

Mr. TAWNEY. You may call Mr. Mantle.

STATEMENT OF A. F. MANTLE, DEPUTY MINISTER OF AGRICULTURE, PROVINCE OF SASKATCHEWAN, REGINA, SASKATCHEWAN.

Mr. MACINNES. Mr. Mantle, you are the deputy minister of agriculture of the Province of Saskatchewan?

Mr. MANTLE. Yes, sir.

Mr. MACINNES. How long have you held that position?

Mr. MANTLE. For five years.

Mr. MACINNES. I understand that you are authorized to state to the commission the views of the Province of Saskatchewan in connection with the subject matter now before the commission?

Mr. MANTLE. Yes.

Mr. MACINNES. Will you be good enough to state those views.

Mr. MANTLE. I might say, gentleman, that, as no doubt most of the members of the commission are aware, in the three prairie Provinces

of Canada the right to and the ownership of the lands and other natural resources, including the control of the waters, are not vested in the provincial governments as they are in the other Provinces, but they are vested in the Dominion Government. They have never been passed over to the provincial governments. On that account the government of the Province of Saskatchewan has no specific interest in this matter. However, there are a number of citizens of Saskatchewan affected one way or the other, and for that reason the Government is interested in this matter as in any other that affects the welfare of its citizens.

Mr. POWELL. Is the Dominion right simply a property right or a property right accompanied by a legislative right?

Mr. MANTLE. I think it is simply a property right which remains with the Dominion because it has never been passed over to the Provinces. On that account the provincial government of Saskatchewan is perfectly well satisfied to leave this case absolutely in the hands of the Dominion counsel and the Dominion authorities, so I shall not have to take up the time of the commission at all beyond stating that fact, and also possibly I might be permitted to state the further fact that in our judgment it would be to the interests of the residents of southwestern Saskatchewan, the residents along the Frenchman River, Lodge Creek, and Battle Creek, if this matter could be settled amicably within a reasonable degree of time in order that the works that will be necessary to enable those waters to be used to the greatest possible advantage may be proceeded with. It is quite possible that private capital would have to be secured. It is quite possible also that provincial legislation would have to be secured. For those reasons the Saskatchewan government is interested in having the matter determined with as little delay as possible.

Mr. TAWNEY. To what extent are the waters of the rivers you have named being utilized now for irrigation purposes?

Mr. MANTLE. I should have to refer you to the irrigation officials of the Dominion Government. All these rights are recorded by Government officials and not in any degree by the provincial officials.

Mr. POWELL. Have you used this technical term, "prior appropriation," in your country?

Mr. MANTLE. There is no legislation dealing with irrigation whatever, so that the term does not occur in our statutes at all.

Mr. WYVELL. Mr. Mantle, have you ever personally visited the valleys of the Frenchman River or Battle Creek and Lodge Creek?

Mr. MANTLE. No; I have not visited any of them.

Mr. WYVELL. From personal knowledge, then, you do not know how many acres of land are actually being irrigated in those valleys, do you?

Mr. MANTLE. No; I do not.

Mr. WYVELL. Have you any records with you that show the amount of land that is actually being irrigated?

Mr. MANTLE. No; those records are Dominion Government records, and, I have no doubt, are available.

Mr. WYVELL. You spoke of some irrigation works on the various streams. Have you the data as to the works controlled by the Dominion officials on those streams?

Mr. MANTLE. Yes; I believe a statement will be made in the course of the hearing on that point.

Mr. WYVELL. Mr. Chairman, it seems that after working several hours the engineers on the part of Canada and persons connected with the Geological Survey, particularly Mr. Stevens, have been able to agree on certain data. If the commission desires, we would be glad to have Mr. Stevens furnish that data with regard to stream flow which they have agreed on.

Mr. TAWNEY. Very well; we will hear Mr. Stevens now.

Mr. WYVELL. I might add that there is other data that may come in later that has not been agreed upon.

**STATEMENT OF G. C. STEVENS, OF THE GEOLOGICAL SURVEY,
WASHINGTON, D. C.**

Mr. WYVELL. Mr. Stevens, will you please give your full name and address?

Mr. STEVENS. My name is G. C. Stevens, Washington, D. C.

Mr. WYVELL. You are in the Geological Survey?

Mr. STEVENS. I am in the Geological Survey.

Mr. WYVELL. How long have you been in the Geological Survey?

Mr. STEVENS. Seven years.

Mr. WYVELL. Were you in the Government service before that time?

Mr. STEVENS. I was not.

Mr. WYVELL. Will you please explain the character of the work you have been doing in the last seven years?

Mr. STEVENS. My work in the Geological Survey has been in what is known as the Water Resources Branch of that service. That branch does the stream gauging of that organization. My work there has been the compilation and analysis and separation of these data for publication in the reports of that service.

Mr. WYVELL. Now, Mr. Stevens, will you in your own way explain to the commission the data with regard to the flow of the streams at the international stations that you have been able to agree upon with the other engineers?

Mr. STEVENS. Gentlemen of the commission, previous to coming to this meeting we had compiled in our office the stream-flow records at the various gauging stations that have been maintained in these waters by our own Government and also those maintained by the Dominion of Canada.

Mr. TAWNEY. Mr. Stevens, will you state whether the data you have there respecting the stream flow is taken from gauge readings that are maintained jointly by the two Governments, or from gauge readings that are maintained by each Government independently of the other, or both?

Mr. STEVENS. I have both, sir.

Mr. TAWNEY. Will you give the location of the gauge and state whether or not it is maintained jointly or independently, so that the record will show what gaugings you are referring to?

Mr. WYVELL. For the sake of the record, unless it is going to be submitted in the form of a blue print later, he might give the monthly flow, or would your honors suggest that it would be better to have a blue print showing that submitted? I refer to the figures which make up the final averages, etc.

Mr. TAWNEY. He had better give those, and then we will determine afterwards whether or not it is necessary to incumber the records with the blue prints.

Mr. STEVENS. As I stated, previous to attending this hearing we had compiled these records from our own publications and also from those at hand of the Canadian Government. On arriving here we found that the engineers from the other side had also compiled these data, and so we agreed upon a conference to discuss them and see where we agreed and where we differed. Concerning these records, we found that we agreed substantially for the records at stations at which we were both interested. There were one or two stations at which we decided it would be better to put a slightly different interpretation upon the records which were compiled. I have made some recomputations for two stations. Those which I have recomputed since yesterday are the two stations near the boundary line on the St. Mary River and on the Milk River.

Mr. MIGNAULT. What are the names of the stations?

Mr. STEVENS. The station on the St. Mary River has been known as the St. Mary River at the international boundary line, and it has also been known as St. Mary River at Kimball. It is known now as St. Mary River at Kimball, and is being operated, I believe, as one of the joint stations at the present time. The United States had maintained a record near this point at the station which they called international boundary from about 1902 to 1912.

Mr. MIGNAULT. Jointly?

Mr. STEVENS. No; that was an independent record. For the years 1913 and 1914 the records were obtained jointly at the station known as Kimball. In our conference yesterday we had decided that these two records at the international boundary and at Kimball should be combined in order to get the best record possible at that point. We included in this combination the records for the old station; that is, the one at the boundary line, from the years 1905 to 1908 and from 1909 and 1911 to 1914 at the Kimball station.

Mr. MAGRATH. How far are those stations apart?

Mr. STEVENS. Those stations are 5 or 6 miles apart. The computations I have made for the total run-off at this station from the combination of records that we agreed upon yesterday gives the mean annual run-off as 720,000 acre-feet. That is equivalent to a mean flow for the year of 990 second-feet. In the same manner we examined the records for a station on Milk River at the eastern crossing, also known as the Milk River at the international boundary, or Spencer's ranch. Records have been obtained at this point by the irrigation officials, beginning in 1908, I believe. During 1913 and 1914 this station was operated jointly by the two Governments. The records at this point, however, were not complete during the year, the records being lacking for the winter months, so we decided to consider the records from the 1st of April to the end of October. Making computations of the flow for that period I have obtained an average run-off in acre-feet of 88,900. That is equivalent to a mean flow of 209 second-feet for that period.

Mr. TAWNEY. How far is the eastern gauge, where the Milk River flows from Alberta into Montana, from the other—

Mr. STEVENS. I am not prepared to state that.

Mr. TAWNEY. You do not know the distance?

Mr. STEVENS. I should say it is 150 or 200 miles, but I am not prepared to say definitely.

Mr. TAWNEY. I want to know the distance between the gauge at Milk River, where it crosses the boundary into Canada, and the other gauge, where it flows from Alberta down into Montana.

Mr. STEVENS. I could not state that distance.

Mr. TAWNEY. I understood Mr. Newell to say that there were two stations on the Milk River, one where the Milk River crosses the boundary into Alberta and another where the Milk River flows out of Canada down into Montana.

Mr. STEVENS. Yes, sir.

Mr. TAWNEY. I want to get the distance between those two stations.

Mr. WYVELL. I think it would be conceded that there are three international stations on the Milk River. As the Milk River flows over into Alberta it comes over into two forks, and there is a gauging station in each one of these forks. Then there is still a third station at the eastern crossing.

Mr. MAGRATH. It was the one at the eastern crossing that was just mentioned, was it not?

Mr. WYVELL. Yes; I was going to ask Mr. Stevens, if he did not have the figures for those two crossings where the river goes into Alberta.

Mr. STEVENS. I have those figures, but I have not made the computations on them since our conference yesterday. I can give the approximate figures on them, if that is desired.

Mr. TAWNEY. They tend to show the variation, if any, between where the Milk River flows into Canada and where it flows out of Canada into the United States.

Mr. STEVENS. I have tabulated figures for the South Fork of Milk River at the point known as Croff's Ranch. That is in the United States, a few miles south of the boundary line. That, I understand, is one of the joint stations.

Mr. WYVELL. May I suggest that if there is a possibility of getting them with more accuracy, with the idea of getting still more accurate information, these gentlemen might confer further, if it meets with the approval of the commission. I did think it well, however, that Mr. Stevens should read into the record the flow by years upon which his mean flow was based at each of the two crossings, respectively.

Mr. MACINNES. And also by months. Of course, we can put it into a tabulated statement later.

Mr. TAWNEY. If you can get it in a tabulated statement, it will save much time.

Mr. WYVELL. Suppose, Mr. Stevens, you give just the years, then, at this time.

Mr. STEVENS. The first value which I gave for the station on St. Mary River, 720,000 acre-feet, is based on records at the station operated by the United States from September, 1902, to December, 1908, excluding January to April, 1903, and January, 1904.

Mr. MACINNES. Did you make any allowance for those months?

Mr. STEVENS. Those months then were taken care of in the monthly averages for January, February, and March, etc.

Mr. MACINNES. You made allowance, you mean?

Mr. STEVENS. Those months would be given the same weight as the effect where we do have records.

Mr. WYVELL. After you give the year, would you mind putting the amount of the mean run-off for that year, making all your allowances?

Mr. STEVENS. The other value which I gave for the Milk River at Eastern Crossing is based upon records for the months of September and October, 1909, from May to October, 1910, and April to October for the years 1911, 1912, 1913, and 1914.

Mr. TAWNEY. It is suggested that when you have your computations made and agreed upon that you submit these groupings for the record, if that can be done.

Mr. STEVENS. Yes, sir.

Mr. MACINNES. Mr. Stevens, you said that those figures were compiled from certain publications from the United States side and from the Canadian side. What are the official names of those publications?

Mr. STEVENS. The United States publications are for the years 1902 to date, and are known as the United States Geological Survey Water Supply Papers.

Mr. MACINNES. They are printed reports, I presume?

Mr. STEVENS. Yes, sir.

Mr. MACINNES. How often are they published?

Mr. STEVENS. There is one report published for each year.

Mr. MACINNES. For each calendar year?

Mr. STEVENS. For each calendar year.

Mr. MACINNES. What are the names of the Canadian reports to which you refer?

Mr. STEVENS. They are the reports on the progress of stream measurements.

Mr. MACINNES. Do the publications from the United States side contain records of all the gauging stations in existence on the Milk River system in Montana, as well as the particular ones that you have referred to?

Mr. STEVENS. Yes; for the stations maintained by the United States and Montana.

Mr. MACINNES. Do those publications contain records of those stations as well as these that you have referred to just now?

Mr. STEVENS. Yes, sir.

Mr. MACINNES. Have you got a similar estimate or average of those stream flows from those other stations?

Mr. STEVENS. I have not, in the form that I gave for these stations.

Mr. MACINNES. But have you got it in the form of averages for the month and for the year?

Mr. STEVENS. I have the monthly averages; yes, sir.

Mr. MACINNES. And you can let us have those, too?

Mr. STEVENS. Yes.

Mr. MACINNES. If you would be good enough to do that, we could then go over it with the Canadian engineers. Has that been done yet?

Mr. STEVENS. Yes, sir.

Mr. MACINNES. You have gone over with them the ones to which I am referring?

Mr. STEVENS. Yes, sir.

Mr. WYVELL. Mr. Chairman, Mr. Conner, of the United States Reclamation Service, is here. He has studied certain phases of this situation. If the commission cares to invite him, I would be very glad to ask him some questions.

STATEMENT OF R. M. CONNER, OF THE UNITED STATES RECLAMATION SERVICE, WASHINGTON, D. C.

Mr. WYVELL. Mr. Conner, will you please give your full name and present employment?

Mr. CONNER. R. M. Conner, engineer in the United States Reclamation Service.

Mr. STEVENS. How long have you been employed as such engineer?

Mr. CONNER. I have been with the Reclamation Service since 1904.

Mr. WYVELL. Were you in the Government employ before 1904?

Mr. CONNER. No, sir.

Mr. WYVELL. What has been the character of your work since 1904?

Mr. CONNER. Preliminary investigations in construction work and in connection with the locations and surveys of ditches, and the construction of the St. Mary Canal, in 1908 and 1909, and also a project for the Fort Peck irrigation system, in Montana.

Mr. WYVELL. You have, I take it, made a study of irrigable areas and such kindred matters, have you not?

Mr. CONNER. Yes, sir.

Mr. WYVELL. You have personally visited the valleys of these two rivers, have you not?

Mr. CONNER. I have been over the greater portion of the line of the St. Mary Canal from out in the St. Mary River to well over toward its joining with the Milk River, and I have been over a portion of the Milk River in the neighborhood of Dodson, the Nelson Reservoir, and the Vandalia irrigation in the eastern end.

Mr. WYVELL. Will you kindly submit to the commission in your own way the facts which you think would be of assistance to them in their work in this investigation?

Mr. CONNER. I would much rather answer questions. I have not any particular speech made up on that line. There is only one point that I thought of that may have been possibly misconstrued, and that is the idea of the irrigable area in the Milk River Valley and the application of the water that we desire to obtain from the St. Mary River in Montana. This is not a question, as I understand it, that is of more vital importance to the Reclamation Service than it is to the entire settlers covering an area of perhaps 12,000 or 14,000 square miles in the Milk River Valley. Just at the present time there are, I conservatively estimate, perhaps 200,000 acres of desert land entry pending patent in the Milk River Valley, depending upon the water supply. An investigation has been made to find if these various desert-land entries have sufficient water for their use. If a sufficient supply could be made available at the eastern crossing of the Milk River into the United States, then the storage of the flood waters upon the numerous tributaries of the Milk River could be carried on and a large area of land irrigated on the benches, or, you might say,

in the valleys of the tributaries. I would place this land as being the more desirable land in that part of the country. A great portion of it is already settled. That is about the only point that I had in mind. If there are any questions to be asked, I will endeavor to answer them.

Mr. SANDS. You spoke of 150,000 acres of land that are now in process of patent. Is there other land there that is patented and irrigated?

Mr. CONNER. There is. I figured out to-day that there are about 8,000,000 acres of land in the Milk River Valley. The country is becoming very rapidly settled. In the investigation that we have just recently completed we found something like 2,300 appropriations upon the various tributaries to Milk River within the United States, and of that number about 900 were actually using water. We were not able to determine the number who had actually patented land, but a large area, I should say perhaps two-thirds of them, had actually received patents. Of course there was also a large number of reservoirs in operation performing several thousand acre feet of water each year.

Mr. SANDS. Then the 150,000 acres was practically only one-third of the land irrigated on the tributaries?

Mr. CONNER. I would not say, Mr. Sands, that they were irrigated. They are partially irrigated, or in so far as water supply is made available some of the water supply being appropriated several times over. We have not any estimate or any data available, but I would say that there are 300,000 or 400,000 acres of land actually in the desert land entries.

Mr. MACINNES. Mr. Conner, you spoke of the tributaries of the Milk River. Were these any of the larger tributaries, such as Battle Creek, Lodge Creek, or Frenchmans River, or were you speaking of the feeders?

Mr. CONNER. I was speaking of all the tributaries of the Milk River within the United States between the eastern crossing of the Milk River into the United States and down to about Glasgow.

Mr. MACINNES. Now, taking the tributaries of the Milk which head in Canada—that is to say, Lodge Creek, Battle Creek, and Frenchmans River and Rock Creek—what did you find there as to the beneficial use? I think you gave a memorandum to our officers on that point.

Mr. CONNER. That should not be taken as a court decree, but only as an idea of the actual amount of water that would be used if it were available, depending upon the acreage of land that the various farmers were actually trying to irrigate.

Mr. MACINNES. Well, what did you find?

Mr. CONNER. At Frenchmans River we found what we would consider a valid right of $37\frac{1}{2}$ cubic feet.

Mr. MACINNES. You had it in acre-feet, too, figured out?

Mr. CONNER. One second-foot to 80 acres was our duty water.

Mr. MACINNES. What would be your sum for changing second-feet into acre-feet? You gave me a certain number of second-feet.

Mr. CONNER. There were $37\frac{1}{2}$ second-feet.

Mr. MACINNES. Can you give that in acre-feet?

Mr. CONNER. That would be on the basis of one second-foot to 80 acres. That would be 3,000 acres.

Mr. MACINNES. Now, then, would you give me the others?

Mr. CONNER. The North Fork of Milk River, which you call Battle Creek, $13\frac{1}{2}$ second-feet; the west fork, which is called Lodge Creek, $18\frac{1}{2}$ second-feet.

Mr. MACINNES. What are the figures for Whitewater?

Mr. CONNER. Twenty-five second-feet. You asked about Rock Creek also. The amount for Rock Creek is $110\frac{1}{2}$ second-feet.

Mr. MACINNES. Did you give us the figures for Frenchmans River?

Mr. CONNER. Yes, sir; $37\frac{1}{2}$.

Mr. MACINNES. What is the total of those in acre-feet?

Mr. CONNER. Those few?

Mr. MACINNES. I asked you as to all the tributaries of the Milk which head in Canada. You gave it to our officers. I thought you had it there.

Mr. CONNER. I gave your officers the total amount. I can give you the totals here. It is 203 second-feet.

Mr. MACINNIS. And in acre-feet, what is it?

Mr. CONNER. Twenty-four thousand three hundred and sixty.

Mr. MACINNES. That is applicable to how many acres?

Mr. CONNER. Sixteen thousand two hundred and forty.

Mr. MACINNES. Now, then, do you know yourself about the geographical situation of the lands which could be irrigated from the particular tributaries that we have just been discussing?

Mr. CONNER. Not personally; only from the lower portion of Rock Creek, of which I have some particular knowledge.

Mr. MACINNES. What additional acreage are you suggesting that could be fairly called irrigable on these particular tributaries in addition to the amount mentioned?

Mr. CONNER. I would not want to commit myself. As I understand it, there are pending, especially on the West Fork, some rather large irrigating ditches which are in process of being constructed, and which have been asked for.

Mr. MACINNES. What they have asked for would not help us very much, would it?

Mr. CONNER. No; but no one in the chaotic condition of the water rights in Montana could state just what the ultimate outcome would be if they had available water supply.

Mr. MACINNES. To come back to the Milk River proper. We know about the different propositions which were taken over by the Reclamation Service. Details were given in the extracts from your seventh annual report this morning. What additional users are there? You gave a memorandum as to them also to our officers.

Mr. CONNER. I do not just get your point.

Mr. MACINNES. Outside of the Reclamation Service project, to what extent did you find beneficial use claimed on the Milk River proper? I understood you to say that it was 500 acre-feet.

Mr. CONNER. That diversion which I spoke of consists of several small pumping schemes for pumping out of the river proper. They could be included in consideration of a matter of this size.

Mr. MACINNES. Now, as to these other propositions that you spoke of in general language, what are they and to what extent was there beneficial use?

Mr. CONNER. They are based on the tributaries entirely. Fifteen second-feet is from the main river. Our investigations cover the numerous tributaries over 14,000 square miles.

Mr. MACINNES. Have you any figures on this at all?

Mr. CONNER. Something like 1,700 second-feet is actually being beneficially used.

Mr. MACINNES. That is the aggregate?

Mr. CONNER. Yes, sir.

Mr. MACINNES. What is that in acre-feet?

Mr. CONNER. In acre-feet it is about 204,000.

Mr. MACINNES. Now, as to the irrigable area in the Milk River Valley. That question has been dealt with from time to time in the reports of the Reclamation Service, has it not?

Mr. CONNER. Yes, sir.

Mr. MACINNES. I suppose we may take those reports, or extracts from them, as expressing the views of the Reclamation Service from time to time as the result of their examination of the situation, may we not?

Mr. CONNER. At the time of publication; yes, sir.

Mr. MACINNES. Yes; at the time of the different publications. I suppose that those reports are available here for the service of the commission?

Mr. WYVELL. The library at the Capitol is very complete.

Mr. MACINNES. In what publications, Mr. Newell, does the Reclamation Service report appear?

Mr. NEWELL. It appears only as the Annual Report of the Reclamation Service, of which 13 have been issued, commencing with 1902.

Mr. MACINNES. What is the official title of the publication?

Mr. NEWELL. The Annual Report of the Reclamation Service.

Mr. SANDS. In speaking of the irrigable area in the annual reports of the Reclamation Service, what particular limitations, if any, were intended in those figures?

Mr. CONNER. It does not, as I understand it, include the entire irrigable area in the valley. It is just that which is expected to be covered by the Reclamation Service canals. Of course, you may go out and make a reconnaissance, and until you have taken into consideration the physical conditions, the number of creeks to be crossed, the number of flumes to be crossed, etc., you can not determine on your first estimates the actual area to be irrigated, and as the construction work proceeds those areas are necessarily changed.

Mr. SANDS. In speaking of the Milk River Valley, there might be a confusion between the Milk River Valley and the Milk River Basin. Does this report deal with the valley proper or with the whole basin?

Mr. CONNER. In our estimates of the irrigable areas published in the Reclamation Service reports we are dealing just with the valley, an area of 2 or 3 or 4 miles in width. When we speak of the basin we mean the total drainage basin, which varies from 50 to 100 miles or more.

Mr. SANDS. That basin outside of the valley, as I understand you, includes 150,000 acres of land that is now pending patent, and perhaps twice as much that has been patented?

Mr. CONNER. I would put that as an estimate only. I would not want to state it as an actual fact. It would be only a rough estimate

from going over the appropriations of water on the various tributaries, of which there were 2,300.

Mr. SANDS. There was one question that was not brought out this morning, Mr. Conner. The flow from the St. Mary River turning into the Milk River would flow several hundred miles. Would you think it important to take into consideration the laws of seepage and evaporation?

Mr. CONNER. They would have to be taken into consideration in the amount of water that would be available for use. Whenever the point of division is determined upon our share would be that proportion. For instance, if we had 200,000 acres of land and a duty of water of an acre-foot and a half, we would need 300,000 acre-feet of water, and assuming a loss of 25 per cent we would need at the point of diversion 400,000 acre-feet.

Mr. SANDS. Have you made any estimates as to the percentage of loss that would be likely to occur between the point where St. Mary River is turned into Milk River and the point at use in the lower valley?

Mr. CONNER. I do not think any conclusive estimate has been made. It is estimated that it would be large. Our records show that there is probably a considerable loss at the present time in the Milk River Channel. The depletions are not in proportion to the drainage area, but we would not dare commit ourselves to what the percentage of loss will be between those two points.

Mr. SANDS. What is the physical condition in the Milk River Valley there? Is it a rapidly flowing stream or a slowly flowing stream? Has it a sandy bank or otherwise?

Mr. CONNER. I am not in a position to state that, Mr. Sands.

Mr. MACINNES. Mr. Conner, you spoke of 12,000 square miles in the Milk River Valley.

Mr. CONNER. Twelve thousand or fourteen thousand. That is practically the same drainage area that is shown on our maps—the drainage area in the United States.

Mr. MACINNES. That is approximately the same drainage area that is shown in these maps?

Mr. CONNER. It checks with our maps and your maps. Our areas read so closely with yours that we accepted yours without any controversy.

Mr. MACINNES. How much of that amount of 12,000 or 14,000 square miles has been leveled over?

Mr. CONNER. I do not think any part of it has been leveled over by the United States or any officials of the United States.

Mr. MACINNES. You say no portion of it has been leveled over?

Mr. CONNER. Not that I know of; only the portion within the Milk River Valley—the 250,000 acres.

Mr. MACINNES. Then it is guesswork as to how much of that could be irrigated under any scheme.

Mr. CONNER. It is an estimate. About one-fourth of it.

Mr. MACINNES. But it is an estimate made without any leveling.

Mr. CONNER. Yes, sir.

Mr. MACINNES. Taking the existing reclamation scheme in the Milk River Valley, without using any of the St. Mary River water, how many acres are being irrigated at the present time?

Mr. CONNER. Do you mean by the Reclamation Service or the private ditches?

Mr. MACINNES. The Reclamation Service, as I understand it, delivers the water to these private ditches.

Mr. CONNER. They do not at the present time, but they may eventually. I should say about 27,000 to 30,000 acres—that is, within the Milk River project. But that is limited on account of the lack of water supply. On the last day of April of this year we did not have sufficient water to operate our irrigation ditch at Dodson.

Mr. MACINNES. What is the maximum that you have irrigated? When I say “you” I mean the Reclamation Service project.

Mr. CONNER. I am not in a position to state that. I do not have the figures with me.

Mr. MACINNES. Is that shown in your report?

Mr. CONNER. Yes; it is shown in our annual reports.

Mr. MACINNES. Have you a rough idea as to how much it is?

Mr. CONNER. I could not state within several thousand.

Mr. MACINNES. You spoke just now as if there was a difference between the Reclamation Service and these private canals, and yet they are spoken of as a project. What is the exact situation?

Mr. CONNER. As I understand the agreement we have with them, it becomes effective at the time when we take the St. Mary water over into the Milk River. I think Mr. Bien can give you the exact information on that point.

Mr. MACINNES. Have you any idea as to how much water is being used in connection with the irrigation of these acres which you spoke of?

Mr. CONNER. The number of acre-feet, do you mean?

Mr. MACINNES. Yes.

Mr. CONNER. No; I can not tell you.

Mr. SANDS. In giving your estimates of the required amount of water in Battle Creek, Lodge Creek, and Frenchman River, you stated a certain number of cubic feet per second. Did that contemplate a steady flow?

Mr. CONNER. That was based on the assumption of a steady flow.

Mr. WYVELL. Mr. Conner, I want to make clear, for the sake of the record, a statement regarding the 12,000 square miles. That is drainage area of the Milk River Valley from the eastern crossing to its mouth.

Mr. CONNER. Yes, sir; a little over 14,000 square miles.

Mr. WYVELL. All of that land within that area is level?

Mr. CONNER. No, sir; it is not level.

Mr. WYVELL. I mean it is level or rolling?

Mr. CONNER. Yes; it is level or rolling. A portion of it in the valleys or in the various creeks is susceptible of irrigation. There are about 40 well-defined tributaries within that area. All these tributaries have small areas coming into them, and on these areas desert-land entries have been made.

Mr. WYVELL. You speak of 40 tributaries. Most of these tributaries are from the south, are they not?

Mr. CONNER. They are about equally divided.

Mr. WYVELL. And from these tributaries a great number of canals have been built?

Mr. CONNER. Small diversion canals; yes, sir.

Mr. WYVELL. Can you estimate with reasonable accuracy the number of small diversion canals from these tributaries?

Mr. CONNER. I would not want to commit myself as to the number. There have been about 2,300 appropriations made on these various tributaries. Quite a few of them have proved up their land—like sheep men—and abandoned them, but there were about 900 found to be in actual use.

Mr. WYVELL. You spoke of from 27,000 to 30,000 acres of land upon which water was being put to beneficial use. You mean, of course, by that in its actual sense that the water is actually being placed upon the land regularly, do you not?

Mr. CONNER. Yes, sir.

Mr. WYVELL. Of course the extension of that farming area depends upon several things. One, I suppose, is the amount of water?

Mr. CONNER. Making the water supply available during the dry season.

Mr. WYVELL. Another is whether or not settlers take up the land?

Mr. CONNER. The land is pretty generally taken up at the present time.

Mr. WYVELL. You mean that there is somebody who is making some attempt to utilize it in some way?

Mr. CONNER. Yes, sir.

Mr. WYVELL. How is the land that is not being irrigated being farmed, so far as you know?

Mr. CONNER. The bench land is being taken up under the homestead entries as dry farming land in 320 acre tracts.

Mr. WYVELL. You believe from the knowledge which you have acquired from actual experience in that country that if the Government had water, and conditions were favorable, a good many more acres of land could be irrigated, do you not?

Mr. CONNER. Yes, sir.

Mr. WYVELL. Can you put an estimate upon that number?

Mr. CONNER. No; I would not want to put an estimate upon it. It might be at least 1,000,000 acres or more.

Mr. WYVELL. Of course, from your knowledge and experience you think it would be some time before that could be done?

Mr. CONNER. Yes; it would be several years, and probably it would never happen on account of the shortage of water.

Mr. WYVELL. And also on account of congressional legislation, etc., upon which funds are more or less dependent.

Mr. CONNER. They all affect it.

Mr. MACINNES. In connection with some estimates that you gave, Mr. Conner, I would like to ask you another question. I understand all those would be based upon an examination that you are making, the results of which you will show to us in Washington in several books, or rather permit our officers to look at the books.

Mr. CONNER. Yes, sir.

Mr. MACINNES. Would you have any objection to those books being placed at the service of the commission in its office at Ottawa, Canada?

Mr. CONNER. That would not be within my power to grant. I do not think there would be any question about it, however.

Mr. NEWELL. I think the question would be one of physical copying.

Mr. MACINNES. I mean subject to the call of the commission or of the Canadian representatives of the commission. So I can understand that those books will be available?

Mr. CONNER. Yes, sir.

Mr. MACINNES. How many books are there?

Mr. CONNER. Ten.

Mr. WYVELL. Aside from Mr. Stevens's work, which is to be completed as soon as he has opportunity, we can think of no more physical facts which we have to present, unless the commission has something that it would like to ask our views upon.

Mr. TAWNEY. I think, possibly, we might hear the representatives of the Dominion Government on the facts that I understand have been agreed to. If they have any information concerning the physical facts which bear upon the question we will hear from them.

Mr. MACINNES. In the first place, we may consider that there is what may be termed a "base map" before the commission of the drainage basins of the Milk River and the St. Mary River, which has been approved of by both countries. I presume that it had better be marked.

(This map was put in and marked "Exhibit A.")

Mr. TAWNEY. This is admitted by both countries to be a correct representation of the matters appearing upon the map?

Mr. MACINNES. Yes.

Mr. WYVELL. It is the most correct map that can be got at any rate.

Mr. POWELL. It is approximate.

Mr. WYVELL. The only reason I speak of that is unfortunately the map may require careful study with the eye, because in joining these two maps together the rivers do not always match, but by a little extra effort it can be seen with the eye.

Mr. TAWNEY. We can take that as being your agreement so far as the map is concerned.

Mr. WYVELL. Yes.

Mr. TAWNEY. Have you blue-print copies that you could furnish to the commission?

Mr. WYVELL. Yes.

Mr. MACINNES. As regards stream measurements, I understand it will be put in that each country accepts the record of stream flow published by the other country, subject to discussion and adjustment between themselves. If any differences may appear it is a matter which may perhaps have to be referred to the commission, but I think it may be assumed that for the future, as in the past, each country will accept the published stream measurements of the other country.

Mr. POWELL. Can you identify the reports?

Mr. MACINNES. I endeavored to do that from the last witness. On the United States side they will be called "Water-supply papers of the Geological Survey" and in Canada "Reports of progress of stream measurements."

Mr. POWELL. It is understood that both are in evidence so far as they are material?

Mr. MACINNES. Yes; for all the years that are past, and as to the future it is understood, although that is a matter that will be dealt with by the commission, that in view of the fact that the records are only published annually, there will be an exchange of records between the two countries from time to time at more more frequent intervals. That, of course, will probably be part of your adjudication of this matter. I just mentioned that as being understood between the two countries.

It would appear to me that in order to have the matter properly before the commission reference should be made to certain facts leading to the making of the treaty. I am not referring in any way to drafts of the treaty, but I wish to give a short review of the earlier history of this matter, which has been referred to in a general way by Mr. Newell, and to call attention to some particular documents which were, no doubt, the foundation of the general statements which he made. I shall not refer to any facts which I consider are controversial, and if they are controversial Mr. Wyvell will no doubt check me. In the first place, I wish to refer to an order in council passed by the Privy Council of the Dominion of Canada on the 8th of January, 1896:

EXTRACT FROM A REPORT OF THE COMMITTEE OF THE HONORABLE THE PRIVY COUNCIL,
APPROVED BY HIS EXCELLENCY ON THE 8TH JANUARY, 1896.

On a report dated 13th December, 1895, from the minister of the interior, stating that a resolution was passed by the International Irrigation Congress of the United States at its meeting at Albuquerque, N. Mex., in September, 1895, asking "for the appointment of an international commission to act in conjunction with the authorities of Mexico and Canada in adjudicating the conflicting rights which have arisen, or may hereafter arise, on streams of an international character."

The minister observes that a glance at the map attached hereto of the Province of Manitoba and of the Northwest Territories will show that in the western portion of the American Continent, situated adjacent to the forty-ninth parallel, within which water can be applied to land by irrigation processes, quite a number of important streams arise within the boundaries of Canada and flow south to the United States, and vice versa, and he (the minister) is satisfied that it would be in the highest and best interests of both countries that in respect of such streams the suggestion of the irrigation convention should be acted upon.

The minister therefore recommends that Her Majesty's ambassador at Washington be requested to inform the Government of the United States that this Government will be glad to cooperate, by the appointment of an international commission or otherwise, as may be agreed upon, with the authorities of Mexico and the United States, with the object of regulating the use, for purposes of irrigation, of the waters of streams which have their origin in one of the countries named and subsequently flow through the territory of another.

The minister further recommends that Her Majesty's ambassador be requested to ascertain at as an early date as possible the views of the Government of the United States in regard to this matter, so that if requisite an appropriation and any necessary legislation to give effect to the arrangement arrived at may be obtained at the forthcoming session of the Parliament of Canada.

The committee advise that your excellency be moved to forward a certified copy of this minute to Her Majesty's ambassador at Washington.

All of which is respectfully submitted for your excellency's approval.

JOHN J. MCGEE,

Clerk of the Privy Council.

To the honorable the MINISTER OF THE INTERIOR.

N. B.—The map referred to is the large three-sheet map dated 15th November, 1894.

Then to this there was the following letter from Sir Julian Pauncefote to Lord Aberdeen, then Governor General of Canada:

BRITISH EMBASSY,
Washington, 27th March, 1896.

MY LORD: I communicated to the United States Secretary of State a copy of the minute of the Canadian Privy Council inclosed in your excellency's dispatch No. 6 of the 17th January last, expressing the concurrence of your Government in the proposed assignment of an international commission to regulate the use, for purposes of irrigation, of waters of streams rising in either of the two countries and flowing through the other, and I asked for an early expression of the views of the United States Government on the matter.

I have the honor to inform your excellency that I have now received the Secretary of State's reply. Mr. Olney does not lack interest in this important subject, yet from the information in the department's possession he can only regret his inability, agreeably to your courteous request, to give expression to the views of his Government upon the subject at the present time.

I have, etc.,

JULIAN PAUNCEFOTE.

His excellency the EARL OF ABERDEEN.

That was the situation in 1896.

Prior in date the situation in Canada was this: That an irrigation act of the Dominion Parliament, which had been drafted in 1893, was introduced and passed in the Dominion Parliament on the 23d July, 1894, which is to be found as chapter 30 of the statutes of that year.

That statute was amended in an important manner, because the first statute was only a tentative one, by chapter 33 of the statutes of 1895, assented to on the 22d of July, 1895.

There was a subsequent amendment to that statute in 1898 and the act was consolidated in the Revised Statutes of 1906, but it was amended again in 1908, 1910, and 1914.

I can put in for the convenience of the commission a copy of this legislation and also a copy of the act as it now stands.

MR. GLENN. What is the object of putting in these documents prior to the making of the treaty?

MR. MACINNES. For the purpose of showing the whole situation and the early history of the question, as Mr. Newell has done in a general way. I shall not be longer than is necessary in dealing with these vital points leading up to this subject.

Surveys which were made by the Canadian Government in 1894 and subsequent years demonstrated that it was possible to irrigate a considerable tract of land in southern Alberta, and a reservation was made by order in council of the Dominion Government of the 21st September, 1897, to safeguard the future development of that district. That was followed by certain applications by and authorizations granted to the Alberta Irrigation Co., which also appears under the name of the Canadian North-West Irrigation Co., the control of which is now held, and is represented here, by the Canadian Pacific Railroad Co.

MR. MIGNAULT. What is the first name of that company?

MR. MACINNES. The first name was the Alberta Irrigation Co., the second name was the Canadian North-West Irrigation Co., and the third name was the Alberta Railway & Irrigation Co.

MR. MIGNAULT. That is the actual company in existence?

MR. MACINNES. That is the actual company to-day, the control of the stock of which is held by the Canadian Pacific Railway Co. Mr.

Drake, the superintendent of irrigation, is familiar with the situation as to the applications and authorizations granted to that company, and he will probably give evidence on that point. I am merely mentioning these facts as showing the history of the matter. There was Dominion legislation, and then use was made of that legislation by this company, and certain rights were granted to it by the Dominion Government.

I might mention, for the convenience of the record, that there was an authorization to the Alberta Railway & Irrigation Co. in May of 1899, which was extended and consolidated in 1902.

Then on the United States side we find that on the 17th of June, 1902, there was passed—I understand for the first time, and it is the earliest legislation on the subject—an act of Congress entitled “An act appropriating the receipts from the sale and disposal of public lands in certain States and Territories for the construction of irrigation works and for the reclamation of arid lands.” That appears to be chapter 161 of the public statutes and was approved on the 17th of June, 1902.

On the 27th of October, 1902, we find an order in council of the Dominion Government, referring again to the resolution of the International Irrigation Congress, to which reference had been made in the previous order in council, and stating that that order in council had been passed and communicated to the United States Secretary of State, and it refers to the answer of the Secretary of State, and it says:

EXTRACT FROM A REPORT OF THE COMMITTEE OF THE HONORABLE THE PRIVY COUNCIL,
APPROVED BY HIS EXCELLENCY ON THE 27TH OCTOBER, 1902.

On a report, dated 15th October, 1902, from the minister of the interior, stating that the International Irrigation Congress, at its meeting at Albuquerque, New Mexico, in September, 1895, passed a resolution asking “for the appointment of an international commission to act in conjunction with the authorities of Mexico and Canada in adjudicating the conflicting rights which have arisen, or may hereafter arise, on streams of an international character.”

The minister further states that in an order in council dated the 8th January, 1896, and communicated to the United States Secretary of State through Her Majesty's ambassador at Washington, it was represented that it would be in the highest and best interests of both countries that in respect of such streams the suggestion of the irrigation congress should be acted upon and the Government of Canada offered to cooperate by the appointment of an international commission or otherwise, as might be agreed upon, with the object of regulating the use, for purposes of irrigation, of the waters of streams which have their origin in one of the countries named and consequently flow through the territory of another. The answer of the Secretary of State was that he did not lack interest in this important subject, yet from the information in his department's possession he could only regret his inability, agreeably to Her Majesty's ambassador's courteous request, to give expression to the views of his Government upon the subject at the present time.

The minister submits that it appears now that under the provisions of an act passed at the last session of Congress, the Government of the United States proposes to divert the waters of St. Mary River into the channel of Milk River for the purpose of irrigating certain lands in Montana.

The St. Mary River rises in the St. Mary Lakes in the extreme northwest corner of the State of Montana, and from there runs due north, crossing the international boundary in range 25, west of the fourth meridian, and finally forms a junction with the Belly River near Lethbridge, the waters of both streams then flowing to the South Saskatchewan River. The greater length of the St. Mary River is situated in Canada and it is not until it crosses the boundary line that the country adjacent to the river is suitable for settlement or available for irrigation by water from the stream. About 6 miles north

of the boundary line the stream is tapped by the canal constructed by the Canadian North West Irrigation Co., and a record has been made against the stream by that company under the provisions of the northwest irrigation act for all available water to irrigate large areas situated in the immediate vicinity of Lethbridge. This company has completed the construction of the necessary canal and subsidiary works to enable this water to be utilized in the tract of land referred to, and has sold considerable land with a water right from the canal in question. The proposed diversion of the river will render useless the greater part of the works constructed at a large expense by the Canadian North West Irrigation Co., and its revenues will be so affected that it will be unable to meet its obligations. The lands reclaimed since the canal was built, being deprived of water, will no longer be suitable for cultivation, and will have to be abandoned. The numerous farmers whose prosperity seemed an assured fact will lose not only what they paid for their farms, but also the money and labor invested in buildings and other improvements.

The minister further states that it has been contended that the streams discharging into the St. Mary River between the heads of the United States and Canadian canals furnish an ample supply for the land irrigated in Canada; that, however, is not the case. The whole of the water now flowing in the St. Mary River is required for irrigating the lands in the vicinity of the town of Lethbridge and the Canadian canal was constructed with a capacity sufficient for carrying this quantity of water.

Should the water of St. Mary River be turned into either the North or the South Fork of Milk River, it will flow for about 150 miles in Canada before it can be used to irrigate lands in the United States. In Report No. 254 of the United States Senate Committee on the Reclamation of Arid Lands it is stated that the diversion canal is to be continued to the South Fork of Milk River, "as it is not considered practicable for the Canadians to divert water at any point in Canada from the South Fork or from Milk River." Again, in the report of the hydrographer of the United States Geological Survey upon which was based the recommendation of the Secretary of the Interior to Congress it is said:

"If the water is turned into either the North or the South Fork of Milk River it first finds its way into Canada before it can be used in the lower basin. The valley proper of Milk River in Canada is comparatively narrow and has little irrigable land, so that any proposition on a large scale must contemplate using the high bench of lands above. Milk River in Canada from the junction of the North and South Forks downstream has a very slight fall—not more than 2 feet to the mile—and a canal of 100 miles or more in length would be necessary before the water could be brought to the upper benches. It is not, therefore, considered feasible to divert the waters from Milk River into Canada."

The minister represents that the surveys made under his direction do not confirm the views expressed in the reports quoted above; on the contrary, they prove that the present water supply of Milk River and any additional amount diverted therein from St. Mary River south of the international boundary can be taken out in Canada at a moderate cost and prevented from flowing again into the United States.

The minister submits that action in this matter should not be governed by a consideration of what Canada may or may not do to protect her interests; a question of this kind should be dealt with on its merits as justice and equity may demand. It is hoped that a proper representation of the great injury which the proposed works would cause to the Canadian Northwest Irrigation Co. and to the numerous farmers depending upon the company's canal for the cultivation of their lands will induce the Government of the United States to modify their irrigation projects, and that with 60,000,000 of acres of public lands awaiting reclamation by irrigation the first project taken up shall not be one involving such disastrous consequences to Canadians.

The committee advise that the Governor General be moved to forward a copy of this minute to His Majesty's ambassador at Washington with a request that he will communicate to the Government of the United States the objections of Canada to the proposed irrigation works, and will express the hope that the flow of the St. Mary River into Canada shall not be interfered with.

All of which is respectfully submitted for approval.

JOHN J. MCGEE,
Clerk of the Privy Council.

To the honorable the MINISTER OF THE INTERIOR.

That was taken up through the proper diplomatic channels, and here is a communication from the British ambassador to the Secretary of State of the United States, dated the 6th of January, 1903:

WASHINGTON, *January 6, 1903.*

DEAR MR. SECRETARY: I have received your note No. 45 of the 29th ultimo, relative to the proposed diversion of the waters of the St. Mary River in the State of Montana, eastward into the Milk River, in which you quote the opinion of the Director of the United States Geological Survey to the effect that the contemplated works are of such a nature as to be inoffensive to any Canadian interests.

I feel some regret at the contents of this communication, especially in view of the consideration which was shown in the analogous case of the complaint of certain inhabitants of Idaho against the action of the Canadian Dyking Co. in damming the waters of Boundary Creek in 1897.

Correspondence in connection with this case, to which I take this opportunity of drawing your attention, passed between Her Majesty's embassy and the State Department in 1897-98. Your Government, having learned that the interests of the United States citizens were threatened by the damming of waters on the Canadian side of the boundary,* expressed the hope that the matter might be fully investigated, in order that if the facts were as stated, prompt measures might be taken for the removal of the obstruction and for the payment of proper indemnity to the United States citizens who had been injured thereby. Careful consideration was given to those representations; an expert examination was made into the merits of the complaints and steps were taken to allay the anxiety of the complainants, although the result of the examination was to show that the effects of the dam had been exaggerated.

I accordingly venture to express the hope that the complaints which have been brought by Canadians in the present instance may receive similar treatment and that you will find it possible to reconsider the reply contained in your above-mentioned note.

I have, etc.,

MICHAEL H. HERBERT.

There was a letter in reply to that from Mr. John Hay, then Secretary of State of the United States, dated 19th February, 1903, which reads:

DEPARTMENT OF STATE,
Washington, February 19, 1903.

MY DEAR MR. AMBASSADOR: I have received a reply from the Interior Department regarding the matter of the diversion of the waters of the St. Mary River in Montana, about which you wrote on the 6th ultimo.

Mr. Hitchcock, referring to the complaint against the action of the Canadian Dyking Co. in damming the waters of Boundary Creek near the international boundary of Idaho, says that that matter is analogous with the matter of the diversion of the waters of St. Mary River in only one particular, namely, that in both cases opposition was based upon the fundamental principles of law in relation to the diversion and management of waters as recognized in the arid region both in Canada and in this country. In the Idaho case, citizens of the United States claimed remuneration for injuries committed by the flooding of their lands as a result of the construction of a dyke on the Canadian side of the international boundary. The right to compensation in damages for such an injury is recognized by all the courts of both countries. After a careful examination of the correspondence in that case, Mr. Hitchcock finds no denial of the injuries alleged by the citizens of the United States, and nothing in the case as presented by the Canadian Government that would afford any reason for a refusal to pay for such injuries. Nevertheless, the matter remained under consideration from April, 1895, until some time in 1899, and the Interior Department is not advised whether the matter has as yet been settled.

In the present case the intention is clearly expressed to avoid all interference with the amount of water to which the Canadian canal on the Milk River may be entitled. The engineer in charge of the work in Montana made a careful investigation of the river with a view to determining the amount of water to which claim might properly be advanced in Canada, and it is the intention of the Reclamation Service, in its recommendation to the Interior Department concerning this project, to make as full provision for the protection of any prior

vested rights to water along the Milk River in Canada as it would make if the river were wholly within the boundaries of the United States and the rights of the citizens of this country only were under consideration.

It is proposed to deal with this matter in strict conformity with the laws concerning the rights to the use of water as recognized by the courts of the arid region, both on this side of the international boundary and on the other. The principle may be stated in the language of section 8 of the reclamation act of June 17, 1902 (32 Stat., 388):

"That the right to use of water shall be appurtenant to the lands irrigated and beneficial use shall be the basis, the measure, and limit of the right."

From an examination of the General Report on Irrigation and Canadian Irrigation Surveys, 1897 and 1898, Department of the Interior, Ottawa, it appears from the statement of J. S. Dennis, acting chief inspector of surveys, in charge, that the Canadian irrigation survey undertook to investigate the feasibility of diverting certain tributaries of Milk River in Canada and carrying the water into Swift Current Creek Valley, where considerable bodies of irrigable lands are located.

In order to carry out this project it would be necessary to divert waters which would otherwise naturally flow into the United States in such way as to use them upon irrigable lands in Canada, a condition which is precisely analogous to that complained of in the matter of the St. Mary diversion. The project is fully considered on pages 1 to 9 of the said report.

The conclusion reached was that: "The cost of construction and maintenance would be too great to warrant the undertaking of such a scheme at the present time." It thus appears that the Canadian irrigation survey had in contemplation a project involving the same principle as that now under consideration by this Government; that the execution thereof was not abandoned but was merely postponed on the sole ground that the expense was too great to warrant the undertaking at the present time.

Inasmuch as the position taken by the Reclamation Service in this matter in regard to the rights claimed in Canada appears to be precisely that which is taken in the case of similar rights within the United States, both being treated according to the recognized rules of law governing the diversion and appropriation of water in arid regions, Mr. Hitchcock regrets that he can see no reason for a change in the position taken by this Government in the matter.

I am, etc.,

JOHN HAY.

That letter is acknowledged.

Then it would appear that there was a protest from certain Montana water users with regard to the canal of the A. R. & I. Co. on the Milk River, and that was communicated to the British ambassador:

MEMORANDUM.

It has been represented to the Government of the United States that a large canal is now in the course of construction in Canadian territory which will divert a large amount of water from Milk River into the Saskatchewan Basin; that all the normal flow of Milk River is now being used by the people of Milk River Valley in Montana, who have built irrigating canals involving a great expenditure of money and have thereby reclaimed 80,000 acres of arid lands. It is further represented that this proposed diversion of the waters of Milk River in Canadian territory will cause great injury to the people of Montana by depriving their reclaimed lands of the water necessary for the purposes of irrigation. It is further shown that the waters of Milk River, which are proposed to be diverted, largely rise in the United States; flow thence into Canada, and return again into Montana; that Milk River rises in an undulating country east of the Rocky Mountains; that it does not receive any drainage from the mountains, but that the supply of water is wholly from rainfall upon the gently undulating country crossed by the international boundary; that the principal tributary streams of Milk River flow northeast, converging on the Canadian side of the boundary line, and that the river continues easterly for about 100 miles and thence crosses into Montana; and that in the lower part of its course the irrigating canals above mentioned have been constructed. It is further shown that the water supply of the river fluctuates greatly; that in the early spring and after heavy rains floods occur; that later in the season the flow declines until there is barely enough water to supply the urgent needs of

the lands reclaimed and irrigated; that the diversion of the water in the upper part of the stream in Canada will work no injury during the time of floods, but that when water is most needed the taking out of the scanty supply will destroy the irrigated farms farther down the stream.

The American interests which would be affected and the serious injury which would be done them by the proposed diversion of the waters of Milk River have been made the subject of an appeal by citizens of the United States to the Department of State, and the subject is respectfully brought to the attention and consideration of His Majesty's Government in the hope that appropriate means may be taken to avert the threatened injury.

DEPARTMENT OF STATE, *May 9, 1904.*

This would indicate that the flood water of the Milk River would be of no value to the United States, but of course that would depend on the storage provided by the United States in the lower Milk River Valley, which would take care of a portion of these floods, a portion of which was taken care of by the dam of the A. R. & I. Co.

A reply to this was sent on the 8th of July, 1904, as follows:

EXTRACT FROM A REPORT OF THE COMMITTEE OF THE HONORABLE THE PRIVY COUNCIL,
APPROVED BY THE GOVERNOR GENERAL ON 8TH JULY, 1904.

The committee of the privy council have had under consideration a dispatch herewith from His Majesty's ambassador at Washington, No. 56, dated 10th May, 1904, with reference to the construction in Canadian territory of a large canal for the diversion of water from Milk River for irrigation purposes and the alleged injury which will result from such diversion by causing a shortage of water for the irrigation of lands from this source of supply in the United States of America.

The minister of the interior, to whom the said dispatch was referred, submits that the records of the Department of the Interior show that authority has been given to the Canadian Northwest Irrigation Co. to divert from Milk River for use on lands owned or held by the company in Canada 500 cubic feet per second at the low-water flow of that stream and 1,500 cubic feet per second during the high-water and flood stages of the river; also that authority has been granted to another applicant to divert 6 cubic feet per second of water from the same source also for irrigation purposes.

The committee advise that the Governor General be moved to forward a copy of this minute to His Majesty's ambassador at Washington.

All of which is respectfully submitted for approval.

JOHN J. MCGEE,
Clerk of the Privy Council.

To the honorable the MINISTER OF THE INTERIOR.

There is a further dispatch from Mr. John Hay, dated 30th December, 1904:

WASHINGTON, *December 30, 1904.*

EXCELLENCY: I have the honor to bring anew to your attention the conditions existing in the State of Montana and the Provinces of Alberta and Assiniboia in relation to irrigable lands along the Milk River, a tributary of the Missouri River.

Two branches of the Milk River, called the North and South Forks, rise in the United States on the eastern slope of the Rocky Mountains, between meridians 113 and 114. The waters flow first northeastward, crossing the international boundary line into Alberta, and then eastward through Assiniboia for about 100 miles, to near longitude 110° 30' west from Greenwich, where they recross the international boundary line and reenter the State of Montana.

On the lower course of the Milk River, in Montana, before it enters the Missouri River, there are approximately 1,000 irrigated farms, covering 80,000 acres, supplied by water taken from the river. During the last year there have been received at this department from settlers numerous protests in relation to the prospective diversion of the waters of the Milk River in Canadian territory for purposes of irrigation. The attention of this department has also been called to the matter by the Department of the Interior of the United States.

Under date of July 15, 1904, you forward to me a copy of an approved minute

of the Privy Council of Canada of July 8, 1904, from which it appears that the Canadian minister of the interior had given authority to the Canadian Northwest Irrigation Co. to divert 500 cubic feet per second of the low-water flow and 1,500 cubic feet per second of the high-water flow of the Milk River, and that this company is now in a position to cut off the greater part of the water supply of the farms of the Milk River Valley in Montana. This diversion would deprive several thousand citizens of the United States of the means of obtaining a living.

The waters in question rise largely in the United States, and, after flowing through Canada and returning to the United States, have been appropriated and put to beneficial use by the inhabitants of the Milk River Valley long prior to any diversion of that river in Canada. Under the laws and customs which have grown up in the arid regions, and which are in force in Canada, priority of appropriation and use has been recognized. If the Canadian corporation be allowed to divert these waters to lands in Canada, for every acre of land irrigated in Canada 1 or 2 acres of agricultural land in the United States may be destroyed. For the Canadian Government to permit such diversion of the waters of the Milk River in Canadian territory, would therefore appear to be an act lacking in friendliness.

The engineers of the Reclamation Service of the Interior Department of the United States believe it possible for the two Governments to make an arrangement whereby the rights of the settlers within the domain of the United States will be preserved and at the same time the water necessary to supply the canal built by the Canadian Northwest Irrigation Co. will be provided.

The engineers report that the waters of the St. Marys River which flow northward into Canadian territory are now being utilized to only a small extent, and they state that it is practicable to store these waters in the United States, conduct them by a canal on the southern side of the international boundary line to the head of the Milk River, and there turn them into the Milk River, so as to increase the ordinary flow of that river and furnish a supply of water for lands in the Milk River Valley within the United States. Under this arrangement the prior rights of the Canadian settlers on the St. Marys River would be protected by permitting its ordinary flow to continue to pass into Canadian territory, and at the same time the great volume of flood water which passes down that river destroying property along its banks would be restrained within the United States and diverted to the head waters of the Milk River, and be put to beneficial use in the lower Milk River Valley in the United States.

The engineers of the Reclamation Service have made examinations and surveys for the purpose of formulating plans for the diversion of the St. Marys River southward in the United States, to localities where the waters could be utilized for irrigation without turning them into the Milk River. Such diversion would be more expensive, however, and would be unnecessary if the plan outlined above should meet with the approval of the Canadian Government.

Owing to the critical situation of the settlers in the Milk River Valley, in the State of Montana, and the desire of the Canadian North West Irrigation Co. to utilize its canal as soon as possible, an early understanding is important. I have therefore the honor to suggest a conference between the representatives of the Government of the United States and representatives of the Canadian Government for the purpose of reaching an agreement in respect to the disposition of the waters of the Milk and St. Marys Rivers.

I have, etc.,

JOHN HAY.

Then, an order in council of the Dominion Government of date 7th June, 1905:

EXTRACT FROM A REPORT OF THE COMMITTEE OF THE PRIVY COUNCIL APPROVED BY THE GOVERNOR GENERAL ON THE 7TH JUNE, 1905.

The committee of the Privy Council have had under consideration a dispatch, dated 2d January, 1905, from His Majesty's ambassador at Washington, transmitting a copy of a letter from the Secretary of State of the United States relative to a diversion of water from Milk River.

The committee have also had under consideration a dispatch, dated 9th January, 1905, from His Majesty's ambassador at Washington, transmitting a copy of a letter from Mr. Charles D. Walcott, Director of the United States Reclamation Service, expressing the desire to obtain data respecting the flow of the

Milk River and of the St. Marys River and the allotment of such waters by the Dominion authorities.

The minister with respect to the conditions existing in the State of Montana and the districts of Alberta and Assiniboia along the Milk River, to which the honorable the Secretary of State refers, it is manifestly in the interests of both countries that the waters of the St. Marys and Milk Rivers should be conserved for the beneficial use of the owners of agricultural and ranch lands through which these rivers flow, and that the Canadian Government should join in an arrangement with the United States Government for the purpose of attaining this end, due regard being had to the protection of vested rights in conformity with the laws concerning the right to use of water as recognized in both countries.

The minister therefore submits that as the United States Reclamation Service has been devoting much consideration to this matter, His Majesty's ambassador at Washington should be asked to invite the United States Government to suggest such a plan for the settlement of all questions in reference to the waters of the St. Marys and Milk Rivers as would be acceptable to both countries.

The minister further observes with respect to the request for information in regard to the flow of the Milk River and of the St. Marys River, and the allotment of such waters by the Dominion authorities, that the Department of the Interior of Canada has not yet made a final determination as to these facts, such a determination being as yet unnecessary, in view of the fact that a license will not be issued to the Alberta Railway & Irrigation Co., which has authority to divert water from these streams, until the completion of its works within the period allotted to it.

The committee advise that his excellency be moved to forward a copy of this minute to His Majesty's ambassador at Washington.

All of which is respectfully submitted for his excellency's approval.

JOHN J. MCGEE,
Clerk of the Privy Council.

To the honorable the MINISTER OF THE INTERIOR.

There is a statement made in this order in council to which I would call your attention, because it is not correct, and I remember it caused some trouble to Mr. Newell. The statement is in the second last paragraph which says:

The minister further observes with respect to the request for information in regard to the flow of the Milk River and of the St. Marys River and the allotment of such waters by the Dominion authorities, that the department of the interior of Canada has not yet made a final determination as to these facts, such a determination being as yet unnecessary in view of the fact that a license will not be issued to the Alberta Railway & Irrigation Co., which has authority to divert water from these streams until the completion of its works within the period allotted to it.

The intention of that statement is correct, but it is unfortunately worded. Under our law a company has rights during the process of the construction of its works. It has an absolute right because a time limit is given to it to construct its works, but the actual license is not issued to it until the works are constructed, so that under our law, as it stands at present, a permit may be issued which is, so to speak, an interim authorization. I remember that at one time Mr. Newell appeared to think that the Alberta company's rights were vague. They were not vague. Under our law they were as definite as if an authorization had been issued.

To conclude this reference to the historical aspect of this case, you will find a very interesting extract from the report of the Canadian section of the International Waterways Commission, dated January, 1907, dealing with this question, and concluding as follows:

The Alberta Railway & Irrigation Co., organized in 1898, has an extensive canal system supplied from St. Marys River. They have also a canal by which water may be taken from Milk River, but this has not yet been put in operation.

One of the projects of the United States Reclamation Service is the diversion of water from St. Marys River to irrigate land chiefly situated in the lower Milk River region. The canal for this purpose may either discharge into Milk River, whose natural channel would be utilized to carry the water through Canada to where it is to be used, or by a more southern route.

Fears have been expressed that this diversion may prejudicially affect the present settlements on the Alberta Railway & Irrigation Co.'s lands in Canada, or the future development, which may, in the natural course of things, be expected in that region, and the matter has been the subject from time to time of diplomatic exchanges between Ottawa and Washington, but no basis of agreement has yet been reached.

The Secretary of War, in his report for the past year, referring to the question of jurisdiction, says:

"Under the law of Congress creating the commission, its jurisdiction is limited to the waters whose natural outlet is by the River St. Lawrence to the Atlantic Ocean. The Canadian Government has from the beginning desired that the commission should consider all questions which may arise concerning the international waters from the Atlantic to the Pacific. To enable the American members to do this, further legislation by Congress is necessary. It would seem proper to comply with the wishes of the Canadian Government in this respect."

If the jurisdiction of this commission is extended as suggested, the matter can be taken up and no doubt some equitable plan of division of these waters can be suggested under the direction of the joint commission.

Mr. MIGNAULT. What diversion is referred to in the third paragraph of that quotation?

Mr. MACINNES. That is a diversion by the United States Reclamation Service of water from the St. Marys River.

Mr. MIGNAULT. Does that refer to the canal?

Mr. MACINNES. Yes; the United States Reclamation Service canal. Then, on the 15th of June, 1907, certain proposals were sent forward with regard to this matter by Mr. Root, then Secretary of State of the United States:

JUNE 15, 1907.

EXCELLENCY: With a view to bringing to a determination the questions so long discussed relating to the use of the waters of the St. Marys River and the Milk River which flow across the forty-ninth parallel boundary between the United States and Canada, I beg to offer the following suggestions for a basis of a treaty for the equitable apportionment of those waters:

It is hereby agreed between the Governments of the United States and Great Britain that the waters of the Milk River and the St. Marys River and their tributaries shall be apportioned in perpetuity for use in the two countries according to the following stipulations and agreements:

1. That for the purposes of this agreement the St. Marys River and the Milk River and their tributaries, which are now separate and independent river systems, shall be treated as though they were the waterways of a single drainage system.

2. That the water available for irrigation from these two river systems throughout the period from March 1 to September 30 of each year, both dates included, shall be apportioned to each of the two countries from day to day in equal amounts.

3. That the failure of either country to fully utilize the right hereby agreed upon to one-half of the available water during the period specified in paragraph 2 shall not be regarded as adding to or diminishing the rights of the other country.

4. That during the period of each year not specified in paragraph 2 the United States may divert or hold back in storage reservoirs any portion of the natural flow of St. Marys River, and Canada may divert any portion of the natural flow of Milk River, in neither case to interfere with existing rights.

5. That the apportionment of water hereby agreed upon during the period specified in paragraph 2 shall be determined in the following manner: The share to which the United States is entitled shall be the total of the following items:

(a) All water of the St. Marys River and its tributaries diverted in the United States for use in its territory and not delivered into Milk River or its tributaries.

(b) All water of Milk River and its tributaries diverted in the United States for use in its territory above the crossing of such streams into Canada.

(c) All water of Milk River (including stored water of the St. Marys River turned into it), not in excess of 2,000 cubic feet per second, flowing into the United States at the eastern Milk River crossing of the international boundary.

The share to which Canada is entitled shall be the total of the following items:

(d) All water of St. Marys River crossing the international boundary into Canada, not in excess of 2,000 cubic feet per second.

(e) All water of Milk River and its tributaries diverted in Canada for use in its territory, excluding any water of St. Marys River turned into Milk River by Canada and which has been measured under item (d).

6. The total quantity of water to which each country shall be entitled, according to the items enumerated in paragraph 5, shall be maintained at equal amounts, as nearly as may be possible, from day to day during the period specified in paragraph 2, under such regulations as shall be agreed upon by the commission provided for in paragraph 14.

7. The amounts of water chargeable to each of the countries under the several items enumerated in paragraph 5 shall include all the waters of the two river systems whether used directly or indirectly by the two Governments or by private parties in their respective territories.

8. That Canada shall in no event divert from the Milk River any portion of the stored St. Marys River water turned into the Milk River system by the United States, due allowance being made for losses while passing through the channels of the Milk River system, as fixed by the commission provided for in paragraph 14.

9. The share of the United States shall in any event include so much of the available natural flow of the Milk River as shall be judicially determined as having been applied to beneficial use on or before November 1, 1905, by the canal systems taking water from the lower Milk River in Montana, the same to be measured at the intakes of said canal systems; and whenever one-half of the natural flow of Milk shall be less than such amount, measured as aforesaid, the share of Canada shall be diminished so that said country shall receive of the natural flow of the entire Milk River system only the excess, if any, beyond such amount of decreed beneficial use. It is understood that the amount of water heretofore diverted for beneficial use from lower Milk River in Montana has been in excess of 350 cubic feet per second when the same was available.

10. The share of Canada shall in any event include so much of the available natural flow of St. Marys River as has been applied to beneficial use on or before November 1, 1905, by the canal taking water from St. Marys River in Canada, the same to be measured at the intake of said canal; and whenever one-half of the natural flow of St. Marys River shall be less than such amount, measured as aforesaid, the share of the United States shall be diminished so that said country shall receive of the natural flow of the entire St. Marys River system only the excess, if any, beyond such amount. It is understood that the greatest amount of water diverted from St. Marys River in Canada, as shown by measurement, has not been in excess of 310 cubic feet per second.

11. The term "natural flow," as used herein, is to be understood as the flow of the river system in question which would pass the point or points specified if no artificial structure had been placed in the stream channel and if no water had been diverted from or turned into it. Such natural flow shall be determined by the commission provided for in paragraph 14.

12. That this agreement for the division of the waters of the Milk and St. Marys River systems shall be regarded as a full settlement of all existing and future claims of both countries to these waters.

13. That the United States shall not be liable for damage of any kind resulting from high-water stages or floods of Milk River, whether occurring at times when water from St. Marys River is being carried in Milk River or not.

14. That the division of the waters herein agreed upon shall be under the supervision of a commission, one member to be appointed by the President of the United States and one member to be appointed by the Governor General of Canada. This commission shall have supervision over the measurement and distribution of the water, and shall be empowered to make appropriate rules and regulations to carry into effect the provisions of this agreement. In all

cases of a failure on the part of this commission to agree upon any matters which it is authorized to decide, the members shall be empowered to select a third member, and for the purpose of deciding the points of disagreement the commission shall consist of the three said members.

These suggestions have been prepared by the officers of the Reclamation or Irrigation Service of the United States, and I trust that they may serve as a basis upon which we may bring this matter to an early conclusion, satisfactory to both Canada and the United States.

I have the honor to be, with the highest consideration, your excellency's most obedient servant,

ELIHU ROOT.

That was followed by an order in council of the Canadian Government of the 2d of March, 1908, which reads:

CERTIFIED COPY OF A REPORT OF THE COMMITTEE OF THE PRIVY COUNCIL APPROVED
BY HIS EXCELLENCY THE GOVERNOR GENERAL ON THE 2D MARCH, 1908.

The committee of the privy council have had under consideration a dispatch dated 20th June, 1907, from His Majesty's ambassador at Washington inclosing a draft of a treaty to be concluded between the United States and His Majesty's Government for the equitable apportionment of the waters of the St. Marys River and the Milk River, and inquiring whether the Dominion Government have any observations to offer on this draft.

The minister of the interior, to whom the said dispatch was referred, states that in the opinion of your excellency's advisers it would have been far preferable that the question of the equitable apportionment of the waters of the St. Marys River and the Milk River, as well as all similar questions arising in all rivers and streams flowing from one country into the other, should be dealt with on the lines suggested by the report of the international waterways commission, but as there is no prospect of immediate adoption or even consideration of the views set forth in that report, and as the season is fast approaching for irrigation works, he has caused the draft treaty, inclosed in the above dispatch, to be carefully considered by the expert officers of his department.

That the Government of the Dominion was appealed to many years ago by persons interested in southern Alberta to develop that district by the construction of a canal system to divert water from St. Marys River and finally decided to take action in the matter after reaching the conclusion from the reports of its own officers and other engineers that the diversion of the St. Marys River could not be carried out in the United States as a commercial undertaking.

That the Government of the Dominion accordingly commenced a canal system for the utilization of the water of St. Marys River under a policy precisely similar to that adopted by the United States under their reclamation act.

That for various reasons the said Government instead of constructing the canal system as a public work entrusted it to private capital without relinquishing their administrative control under the irrigation laws of the Dominion.

That the irrigation company formed for the purpose of carrying out this project laid out plans for the construction of an extensive irrigation system for the development of a large tract of land and were given a term of years by the Government to complete the canals, which are essentially public in their character.

That the construction of this canal system has been actively carried on and good faith kept with the Government by the company.

That in so dealing with this project the Government has innocently created vested rights under the laws of the Dominion.

That under the most favorable circumstances the diversion of the waters of the St. Marys River in the United States will seriously affect the rights so created, as well as the public rights to the use in development of public lands of the natural surplus water of streams flowing through the territory, not for the purpose of protecting similar rights in the United States, but in order to create rights not now in existence. There is a somewhat indefinite prior claim on behalf of the settlers on the lower Milk River which the treaty proposes to recognize and which apparently may at certain seasons allow Canadians no use whatever of the water of Milk River. Moreover, the draft treaty provides for the carriage of a very large volume of water by the channel of Milk River, in Canada, all of which water must be allowed to pass through to the United States, while the Canadian use is restricted to a part only of

the natural flow, which in the low-water period is very small. It is felt that the concession asked from Canada in this regard is a very great one, in view of the difficulties which may arise from the restriction thus placed upon the settlers on the banks of the river, and of the liability of damage to property from the increased height of water, and that there is not sufficient compensation allowed in the treaty for such concession.

That the division of the waters of the St. Marys and Milk Rivers on the terms suggested in the draft treaty would, in practical operation, result in the Dominion of Canada receiving a less proportion of the water than that to which this country is equitably entitled, as, although the rights given to the United States over the waters of St. Marys River are, in terms, balanced by rights given to Canada with respect to Milk River, the latter river is by no means equal in volume of constancy of flow to St. Marys River.

That for these reasons, and in order to give a fair measure of protection to the vested rights created in Canada, this country should receive considerably more water than the proposed treaty provides for apportioning to it.

That the Dominion of Canada is desirous of reaching a settlement of this matter and would suggest that, in order to arrive at a fair and reasonable arrangement, the Government of the United States should appoint a representative to confer with a representative to be appointed by the Government of the Dominion to consider a basis of agreement which may be submitted to their respective Governments.

The committee advise that your excellency may be moved to send a reply in the sense of this minute, if approved, to His Majesty's ambassador at Washington and to the right honorable the secretary of state for the colonies for the information of His Majesty's Government.

All of which is respectfully submitted for approval.

RODOLPHE BOUDREAU,
Clerk of the Privy Council.

To the honorable the MINISTER OF THE INTERIOR.

The references to the report of the commission which preceded this honorable commission is on pages 24 and 30 of the report of both sections of the International Waterways Commission of date 15th November, 1906.

I read from page 30:

As questions involving the same principles and difficulties, liable to create friction, hostile feelings, and reprisals, are liable to arise between the two countries, affecting waters on or crossing the boundary line, the commission would recommend that a treaty be entered into which shall settle the rules and principles upon which all such questions may be peacefully and satisfactorily determined as they arise.

I would also call attention to the authorities which are cited, with approval by all the members of that international board, with regard to the use of such waters. It may be more convenient if I read a few lines:

The common law protects riparian owners against permanent diversions of water which injuriously affect their rights, and this law is founded upon principles, not merely of social necessity, but of justice and right. While the common law is not a part of the law of nations, its principles, so far as they are founded in justice and equity, ought, where practicable, to be applied by nations acting in their sovereign capacity.

In other words, although there may be some question as to what may be international law relating to the waters of a river going from one country to another, there can be no doubt as to how they should be dealt with under international relationship or comity of nations.

Mr. POWELL. Are there any authorities to the effect that by the common law of one country, which is not part of international law, when two countries enter into a treaty with respect to a matter

which is the subject of common law, or any law which is the same on both sides, that is the basis of the agreement?

Mr. MACINNES. That is the rule laid down in cases between the different States of the Union. You are no doubt aware that there seems to be no rule laid down as to what is the international law on the subject; I mean to say there has been no decision on the point as between two countries. There is the opinion of the Attorney General of the United States in one case, and there is also another opinion by Mr. Evarts. In another case, where the situation was reversed, Mr. Evarts said:

As this is not only in direct opposition to the recognized rights of riparian proprietors, but is also contrary to that good feeling and harmony which ought to exist between collaborators in peaceful pursuits, and might, moreover, if permitted to continue, result in bitter feeling and possible breaches of the peace, I most earnestly request, in these high interests, that you will have the goodness to bring the matter to the attention of your Government with a view to procuring a cessation of the annoyance complained of. (Vol. 1, p: 63, Wharton's International Law Digest.)

This was addressed to the Mexican minister, in reference to the matters complained of. There the complaint was by Mexico against the United States. The appeal of Mr. Justice Harmon was on a complaint by the United States against Mexico.

I may say that that opinion is not in accord with the decisions where the matter has come up between two different States of the Union. I can find no case between two countries where there has been any decision on the point.

Mr. MIGNAULT. There could hardly be a decision of the courts between two countries.

Mr. MACINNES. That is perfectly true, but I can not find where it has been laid down in any way as an accepted proposition.

Mr. MIGNAULT. It is a matter of arbitration or treaty between two countries.

Mr. MACINNES. Mr. Oppenheim, who is one of the leading writers on international law, takes the view as laid down in cases between different States of the Union, namely, that the law as between different States is the same as the law between different individual riparian owners.

Then, there is an order in council of the 2d of March, 1908, which contains the objections raised by the Canadian Government as to what were termed the Root proposals, and the suggestion was made that the matter should be further taken up. Without going into these negotiations, which I am not prepared to say it would be proper to lay before this commission, and I do not think it should be necessary so far as I can see at the present time, this treaty, containing Article VI, was signed on the 11th of January, 1909, and ratified on the 5th of May, 1910.

Mr. TAWNEY. Ratified by the United States in September?

Mr. MACINNES. Ratified by the United States Senate in March, 1909. Ratifications were exchanged between the two countries on the 5th of May, 1910. The date of the treaty is said to be 5th of May, 1910.

Mr. TAWNEY. The date of the treaty is January 11, 1909.

Mr. MIGNAULT. It is always referred to as of that date.

Mr. MACINNES. Yes; but the last clause of the treaty says that the time for it to run shall be from the date of the exchange of ratifications.

Mr. WYVELL. We of the United States have listened with great interest to the discussion of the learned counsel for Canada. We are not apprised of its purpose. We are not unmindful of the diplomatic discussion nor are we unfamiliar with all that has taken place. If it is the desire of the counsel for Canada and also the desire of the commission that this correspondence should be put in, we think it should be done in an orderly way and that the whole of the correspondence which either country submits would be valuable should be put in. These discussions on international law are no doubt very interesting also, but if the learned counsel on the other side had consulted Oppenheim a little more closely he would have found that the doctrine he now lays down as from Oppenheim was from some little meeting in Madrid, Spain, and which was not attended by any representative of the United States or Great Britain. He would also find that the doctrine so strongly stated by Justice Marshall has been repeated by the United States Supreme Court and that other eminent authority has laid down the principle with equal emphasis.

It seems to me that until the purpose of all this is made plain by the counsel for Canada we ought at least to know what we are driving at. I understood that the commission was about to take up the examination of the engineers on behalf of Canada when this discussion arose. If the commission desire it, we are perfectly willing that this correspondence should go in, but all the correspondence should go in between the two countries.

Mr. GLENN. What Mr. Newell said about the historical facts and what Mr. MacInnes has submitted can only be of interest to us from an historical point of view.

Mr. MACINNES. My learned friend, Mr. Wyvell, no doubt intends to be fair, although judging by the tone of his remarks one would hardly think so. Mr. Newell prepared a statement of the facts relating to this matter, and I had not the advantage of being able to put my remarks in written form as did Mr. Newell. Mr. Newell made reference to certain historical facts, and he dealt with them perfectly fairly, and I hope that I have done the same thing.

Mr. GLENN. I think so.

Mr. MACINNES. I certainly had no intention of doing otherwise. It is not a question of formal proof on this, that, or the other thing, but it is a question of making a statement on the historical facts which led up to this treaty, which may be of use in considering the matter. I did not think that any exception would be taken to anything I have said or read.

Mr. WYVELL. There is no objection to Mr. MacInnes's statement going in, but I think it should go in in an orderly way, and that the whole correspondence should go in, at least that portion of the correspondence between the two countries which I, on the part of the United States, would like to have go in, as well as that part of it which Mr. MacInnes, on behalf of Canada, would like to have go in.

Mr. TAWNEY. I understood that the purpose of counsel for the Dominion of Canada was to place the commission in possession of the historical facts which led up to the making of this treaty, in so far

as Article VI is concerned, as an aid in ascertaining what the purpose of the Government was at the time. If there is any further official correspondence in the State Department or anywhere else bearing on the question, it would be clearly proper to have that go in, too, as tending to show what the purpose of the Government was, and also tending to show what the conditions were that this particular provision of the treaty was to meet and to settle if possible. I have in mind some correspondence that passed between the State Department and the Senate of the United States while the treaty was pending in the Senate bearing upon this particular article of the treaty for the purpose of satisfying the Senators from the State of Montana. I do not recall what the views of the State Department were at that time, but I remember distinctly that there was an interpretation of Article VI by the State Department for the benefit of the representatives of the State of Montana in the Senate. I do not know whether that correspondence is now available or not.

Mr. MIGNAULT. Speaking for myself, I do not think we should refuse anything that would throw any possible light on the subject, although so far I do not see how it is going to assist us. I think Mr. Wyvell is right; if part of the correspondence goes in, the whole should go in.

Mr. MACINNES. That is exactly my view.

Mr. MIGNAULT. So far as it can assist us, there is no objection, that I can imagine, to the whole of it going in.

Mr. GLENN. I understood that Mr. Newell read what he called an historical review of the case, and that Mr. MacInnes was giving his side of it.

Mr. MACINNES. That certainly was my intention. My learned friend is at liberty, I suppose, to put in any documents he may require in the case, but, what was in my mind, as Gov. Glenn has stated, was to make an historical statement, as Mr. Newell did yesterday morning.

Mr. WYVELL. Mr. Newell's statement was with regard to the physical and engineering side, rather than the historical side of the case, and, naturally, on the suggestion of your honor I expected to hear the engineers on the other side making similar statements. We have heard no response to this invitation to meet the suggestions which we have prepared, and for the present we understood in the ordinary way that the physical facts from the Canadian point of view would be presented first.

Mr. POWELL. The suggestion is that you will be allowed to supplement what has been put in by putting in your side of the history of the record.

Mr. WYVELL. I have no objection to this going in, but I wanted to be understood that when we come to that point we will probably want the whole correspondence, or at least that part of it which we feel it desirable should go in.

Mr. TAWNEY. That part of the correspondence which relates directly to the situation between the two Governments in respect to these waters may be of assistance to the commission.

Mr. GLENN. I understood Mr. MacInnes to say that he was putting in the historical part of the case, and that he was not making the statement for the purpose of basing any argument upon it.

Mr. MACINNIS. I did not submit any argument upon it.

Mr. GLENN. And it is preliminary to the statement which he intends to submit on the part of the engineers.

Mr. MACINNES. That is entirely correct. I only intended this as a statement of historical facts, and I thought it a good way to make it, because the ground has already been covered, in general terms, admirably by Mr. Newell, and I thought the best way to get the matter before you was by referring to the particular documents. My intention is to follow that my putting in the physical facts we have knowledge of on our side.

Mr. WYVELL. I have been rather expecting some indication of purpose on the part of the Canadian representatives as to what their object was in not limiting the testimony to the physical facts. If there is any purpose on the part of the Canadian representatives in offering this testimony and this correspondence, we should know it. We did not ask for it. Perhaps the gentleman would be willing to state what it is.

Mr. MACINNES. It is for the same purpose exactly as Mr. Newell's statement of this morning, for the purpose of enabling the commissioners to know such portion of the history of this case as may be necessary to illuminate their consideration of the physical facts.

Mr. GLENN. Mr. Wyvell, if you remember, Mr. Newell read almost substantially what Mr. MacInnes is putting in, and it looked to me as if Mr. MacInnes's statement was on his side a presentation or a qualification of some of the facts which Mr. Newell gave in his statement. After Mr. Newell made his statement you followed it up with certain facts, and I suppose Mr. MacInnes is going to do the same thing.

Mr. WYVELL. There are certain limitations on us. We are not here submitting anything, so far as I know, on the part of the United States, but if it is thought desirable at this time we have no objection in calling the attention of the commission to the fact that I think has been clearly brought out by Mr. Newell that the duties of the commission are to apportion the waters to be used, as distinguished from the waters that run to waste. If the commission thinks, in their performance of these duties, the historical side of this thing should be admitted, I am perfectly willing it should go in.

Mr. GLENN. We not only have to do that, but we have to construe Article VI, and anything throwing light on that is certainly very gratifying to me.

Mr. WYVELL. That brings up the point whether it may be well for the representatives of the United States to state what their exact position is here. The position of the United States Government is that Article VI—and it is made clear here because of the invitation on the part of the commission and the desire on the part of the representatives of the United States to furnish such information as may be valuable to the commission, and not for the purpose of submitting any issue—that Article VI deals with international waters only—that is, waters which originate in one country and which either flow, or if not interfered with would flow, across the boundary line into the other.

The first two sentences of the article lay down certain general principles of equality and division, the object being to secure a more beneficial use of the international waters. These sentences likewise provide the maximum amount of water to which each country is entitled

whenever in the remote future the plans of either country are developed so that this maximum amount can actually be applied to beneficial use.

The waters to be divided to determine this maximum amount are the waters of the St. Mary River, which, originating in the United States, flow from the United States across the international boundary or which would cross it if not interfered with, together with the waters of any tributaries of the St. Mary which, originating in the United States, flow therefrom across the boundary, reaching the St. Mary in Canada, and the waters of the Milk River, which, originating partly in the United States and partly in Canada, flow from Canada across the international boundary at the point where the Milk leaves Canadian territory for good, said point being known as the eastern crossing, or which would flow across said boundary if not interfered with, together with the waters of any tributaries of the Milk which, originating in Canada (flow either from the Province of Alberta or Saskatchewan, or both, across the boundary line, or which would flow across it if not interfered with, and which tributaries empty into the Milk in Montana below the eastern crossing; measurements in the case of each river or tributary to be made at the boundary and each country to be charged with the amount of water received by it at the boundary and the amount of water diverted by it, which said water otherwise would flow across the international boundary.

The last paragraph of the article charges the International Joint Commission with the duty of directing the measurement and apportionment of the waters to be used by each country, not with the measurement and apportionment of waters which necessarily run to waste.

It is impossible to measure and apportion the joint waters equally, because neither country is in a position to apply to beneficial use the maximum amount which the first paragraph authorizes. Therefore it is submitted that no theoretical division of unused waters which run to waste should now be attempted, when all concede that the waters can not be, in fact, divided equally or applied to beneficial use. It is suggested, therefore, that the commission direct the division of the waters which are to be actually used on the lands, ratifying the establishment of the present international measuring stations, establishing any new ones which it deems necessary, and meeting the problems of division as they come up.

The prior rights mentioned in the second sentence should, of course, always be observed.

MR. TAWNEY. Mr. MacInnes, I think you may well proceed with the statements of your engineers now, if you have any statement to offer in regard to the physical facts that have been presented by the Government of the United States.

The matter which Mr. Wyvell has presented to the commission will be considered in connection with the question, that it is incumbent upon the commission at this time to decide, namely, whether or not the commission is prescribed to the limitations mentioned. While we are here now we might as well go on with the hearing in the case.

MR. WYVELL. It might be well to ask the reporters to write out that portion of Mr. MacInnes's statement which refers to the papers; not necessarily quoting from the papers, because if he gives the reference we can probably identify them.

I wish, in the first place, for the information of the commission, to ask that all of the papers, extracts from which were read by Mr. MacInnes or referred to by him, for the information of the commission, be printed in their entirety in the record, and that in addition to those papers there be printed with them, first, this statement:

The act known as the reclamation act, appropriating—

Mr. MIGNAULT (interrupting). Is that a statement made by you, Mr. Wyvell or something from which you quote?

Mr. WYVELL. This is my statement to be printed alongside of the statements made by Mr. MacInnes.

The act known as the reclamation act, appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands, was adopted June 17, 1902 (32 Stat., 388).

While this act was under consideration by Congress a report on the question of reclamation of arid lands was submitted by the Senate Committee on Public Lands (S. Rept. No. 254, 57th Cong., 1st sess.), which was accompanied by a letter from C. D. Walcott, Director United States Geological Survey, dated January 25, 1902, presenting "a series of approximate estimates of the possibilities of land reclamation by irrigation," among which were the following:

ST. MARY DIVERSION CANAL.

The proposed St. Mary diversion canal is for taking water from St. Mary River, in northern Montana, and carrying it across gravel ridges to the headwaters of Milk River. The engineer's estimates of the quantity of earth and rock to be moved and of the cost of the diversion dam and other structures have not yet been completed, but the incomplete computations indicate that the probable cost of taking 1,200 cubic feet per second over the divide to the North Fork of Milk River will be \$686,500; to the South Fork, \$1,173,000.

It is proposed to continue the canal to the South Fork, as it is not considered practicable for the Canadians to divert water at any point in Canada from the South Fork or from Milk River.

From the South Fork water can be taken over to Cutbank and east to Milk River, if necessary, in the future.

There would be reclaimed by this canal 120,000 acres, all public land, which would have a probable value of \$25 per acre, or \$3,000,000, and would sustain a population of 30,000.

I ask also that the following papers be printed in the record:

The British ambassador was advised by the Secretary of State, in his note of December 29, 1902, that the matter contained in the Report of the Privy Council, approved October 27, 1902 (see p. 58), had been laid before the Secretary of the Interior, to whom the Director of the United States Geological Survey had reported, as follows:

"The correspondence relates to the proposed diversion of waters of St. Mary River easterly into the head of Milk River and urges, first, that by so doing property in Canada would be injured, and, second, that the water, if turned into Milk River, could be taken out again in Canada.

"In relation to the first claim, the situation should be clearly borne in mind that the Canadian canal can utilize only the summer flow of the river. Moreover, the canal has sustained extensive injuries by the flood of 1902, the headworks being destroyed, so that the canal has not recently been in use.

"It is proposed by the engineers of the Reclamation Service to hold the flood waters in St. Mary Lake, and by so doing further destruction of property in Canada would be averted. These flood waters are not of use to the Canadian canal and can not be utilized, as the opportunities for storage are situated in the United States.

"It is not proposed to take away from the Canadian canal the water needed, but, on the contrary, it is known that sufficient water will reach this canal to supply its needs.

"As to the second claim, that the water, even if taken over to the head of Milk River, can be rediverted by the Canadians, it is admitted that it may be feasible to take out a canal from Milk River in Canada. On the other hand, should the stored water from St. Mary Lake be allowed temporarily to flow down the channel of Milk River, it is not believed that a canal would be built by the Canadians to take this water, as the flow, being controlled by floodgates at the outlet of St. Mary Lake, would be regulated in the interest of persons for whom the water was stored and could be kept at any time, if necessary, on the south side of the international boundary. The probabilities of diversion from Milk River in Canada are extremely remote.

"By the storage and diversion of flood waters from St. Mary Lake a large area of land, aggregating, according to alternative plans, from 200,000 acres upward to 500,000 acres, could be brought under irrigation, affording homes for several thousand persons and increasing property values to a large extent beyond the mere area of lands reclaimed. To assert that the waters must always flow to waste will not only prevent the development of a large section of Montana, but will result in no benefit whatever to any person or persons in Canada.

"The only objection, apparently, made to the construction of storage works on the St. Mary Lake is the fear that in some way these works may in the remote future prevent the enlargement and extension of a now useless canal in Canada. This canal, although it claims a capacity of 400 cubic feet per second, has only carried about 125 cubic feet per second, and when measured in 1901, before it was rendered useless, was conveying only 66 cubic feet per second.

"The full capacity of this canal as constructed is supplied by rivers entering below St. Mary Lake, the two largest of these being Kennedy Creek and Boundary Creek. In July, 1902, the former was discharging 1,000 cubic feet per second, with an average for the month of 600 cubic feet per second. Boundary Creek discharges about one-half the amount of Kennedy Creek. During May, June, and July great quantities of water passed down St. Mary River from these lower streams, far more than the capacity of the Canadian canal.

"I have, etc.,

"JOHN HAY."

DIVERSION OF MILK RIVER, MONT.

MARCH 14, 1904.

The honorable the SECRETARY OF THE INTERIOR,

Washington, D. C.

SIR: I have the honor to acknowledge, by reference from the department dated March 3, for report in duplicate and return of papers, a letter from the Acting Commissioner of the Office of Indian Affairs, dated February 29, transmitting a communication from W. R. Logan, United States Indian agent, dated February 19, and a letter from Mr. W. B. Sands, dated February 7.

This correspondence calls attention to the fact that the Canadian canal is being constructed to divert water from Milk River, and this will injure the property of the Government, particularly the irrigation system upon Fort Belknap Reservation. The matter is one of great importance to the Government, as well as to the people of Montana, and I respectfully recommend that, as suggested in other letters, the matter be taken up through the Department of State.

The papers referred to are returned herewith.

Very respectfully,

CHAS. D. WALCOTT, *Director.*

Mr. MACINNES. I understand that my learned friend took exception to my statement of fact, which I understood to be simply a statement of fact and not an encumbering of the record with a lot of correspondence.

Mr. WYVELL. I took no exception whatever to anything that has taken place, but merely made the suggestion that the letters as referred to by Mr. MacInnes be introduced in their entirety and the remainder of the correspondence be introduced with them. I will ask that that letter be considered.

Mr. TAWNEY. Go ahead.

Mr. WYVELL. On October 13, 1904, the Secretary of State again wrote to the British ambassador, inclosing a copy of a letter from the Acting Director of the United States Geological Survey, showing that if any considerable portion of the amount of water which the Northwest Irrigation Co. was authorized to divert from Milk River was so diverted, serious injury would result to prior proprietors of the water in Montana, and he adds:

In view of the vital importance of the matter to the citizens of Milk River Valley and the property of the United States, particularly the irrigation system on Fort Belknap Indian Reservation, I should be very glad if you would, in the light of this report, and in the exercise of your good offices, revive the matter with the Dominion Government, to the end that every possible means be taken to secure an equitable settlement of the questions involved, and to conserve all the rights in the premises of this Government and of the citizens of Montana.

A further note to the British ambassador was sent on January 6, 1905, by the Acting Secretary of State, with which was inclosed a copy of a letter from the Director of the United States Geological Survey, expressing the desire to obtain data respecting the flow of the waters of Milk River and the allotment of such waters by the Dominion authorities, also data with reference to the St. Marys River.

DEPARTMENT OF STATE,
Washington, January 6, 1905.

His excellency the right honorable

Sir H. M. DURAND, G. C. M. G., K. C. S. I., K. C. I. E., etc.

MY DEAR MR. AMBASSADOR: Adverting to previous correspondence with respect to the diversion of the waters of Milk River, I have the honor to inclose copy of a letter from the Director of the Geological Survey expressing the desire to obtain data respecting the flow of the waters of Milk River and the allotment of such waters by the Dominion authorities; also data with reference to the waters of the St. Marys River, as Mr. Walcott has set forth in his letter.

I should be grateful if you would, in the exercise of your good offices, cause this request to be referred to the competent authorities with a view to procure, if there be no objection, the information desired.

I am, my dear Sir Mortimer,

Faithfully yours,

FRANCIS B. LOOMIS.

The next is a letter written by Mr. Bryce, the British ambassador, to the Secretary of State, under date of March 10, 1908, which reads as follows:

No. 56.]

WASHINGTON, March 10, 1908.

SIR: I have the honor to inclose herewith copy of a minute of the Privy Council of Canada which I have received this morning and which contains an expression of the views of the Dominion Government on the draft treaty for the apportionment of the water of the St. Marys River and Milk River which was forwarded to me in your note No. 88 of June 15 last.

You will observe that the Government would have preferred that the matters for which the draft treaty makes provision should have been dealt with in common with all similar questions arising in streams flowing from one country into the other on the lines suggested by the International Waterways Commission. As, however, there appears to be no prospect of immediate adoption of the views set forth by the commissioners, and as the season is fast approaching for irrigation works, they have submitted the draft treaty to a careful examination. While setting forth in the inclosed minute the objections they entertain to the provisions, they suggest that the United States Government should appoint a representative to confer with a representative to be nominated by the Canadian Government with the object of considering the basis of an agreement to be submitted to their respective Governments.

I shall be much obliged if you will be so kind as to let me know your views at your earliest convenience in order that if you concur, the two representatives may begin work with the least possible delay.

I have the honor to be with the highest consideration, sir, your most obedient humble servant,

JAMES BRYCE.

The Hon. ELIHU ROOT,
Secretary of State.

I also introduce a letter to the British ambassador under date of April 9, 1908, and a letter from the British ambassador to the Secretary of State under date of April 10, 1908:

5150/11.]

APRIL 9, 1908.

EXCELLENCY: Referring to your note of the 10th ultimo, by which you convey to this department the suggestion of the Canadian Government that the United States Government appoint a representative to confer with a representative to be nominated by the Canadian Government with the object of considering the basis of an agreement to be submitted to their respective Governments with respect to the question of the diversion of the waters of the Milk and St. Marys Rivers, I have the honor to inform you that Mr. F. H. Newell, the Director of the Reclamation Service, has been designated to meet the representative.

His Excellency the right Hon. JAMES BRYCE, O. M.,
Ambassador of Great Britain.

WASHINGTON, April 10, 1908.

SIR: I have the honor to acknowledge the receipt of your note, No. 290, of yesterday's date, in which you inform me that Mr. F. H. Newell has been designated to meet the Canadian representative to consider the basis of an agreement with respect to the question of the diversion of the waters of the Milk and St. Marys Rivers.

I have just received a communication from the administrator of the Dominion of Canada stating that Mr. W. F. King, chief astronomer of the Dominion, has been appointed the representative of the Canadian Government for the same purpose.

Mr. King is expected to arrive in Washington within a week, and I shall not fail to notify his arrival to you in order that he may meet Mr. Newell as soon as possible.

I have the honor to be, with the highest consideration, sir, your most obedient humble servant,

JAMES BRYCE.

The Hon. ELIHU ROOT,
Secretary of State.

In those last two letters it was made known that Mr. Newell would be the representative of the United States and that Mr. King would be the representative of Canada.

Mr. MIGNAULT. We can put in Mr. King's opinion. It would be probably not to the same effect as Mr. Newell's. However, I would not want to exclude anything that is material.

Mr. MACINNES. We now come to the point where we find that certain officers were appointed on the sides of both Governments, and that they, with the assistance of the diplomatic representatives of both Governments—Mr. Root, I understand, as representing the United States, and Viscount Bryce, who I know personally had to do with the drawing of this treaty, and others—reached an agreement which is embodied in Article VI.

Mr. TAWNEY. I think that Mr. Gibbons had as much to do with it as Mr. Bryce.

Mr. MACINNES. There were various gentlemen interested. Mr. Chandler Anderson was also interested on behalf of the United States. Now we have reached the point where these definite negotiations commence, with the result that you find before you Article VI. Now, surely it can not be evidence before you as to what were the various drafts or memoranda passing between the two parties which resulted in this agreement.

Mr. GLENN. You put in a good deal of that yourself, Mr. MacInnes.

Mr. MACINNES. Nothing that I put in went beyond the date of 1908, prior to the appointment of these two gentlemen. I do not feel that it is necessary for my learned friend to put in this additional correspondence, but let it go in, only to that point, however, because anything subsequent to that would have to be amplified by these various gentlemen who drew up this draft. We have to deal not only with this matter, but with other similar cases which may come before this commission. I am not making a statement at random, but I may say perfectly candidly that I do not think there is anything in these drafts which would assist this court to an interpretation or which would be prejudicial to Canada in its view as compared with what might be prejudicial to any suggestion which has been more or less tentatively put forward here. But on the matter of principle I should have thought that drafts are not evidence before any court.

Mr. TAWNEY. Mr. MacInnes, this is an inquiry on the part of the commission. I do not think there is any parallel at all between this proceeding and a proceeding upon a stated issue. The inquiry of the commission is for the purpose of obtaining information concerning the physical facts, and such information as can be obtained concerning the intent of the high contracting parties in entering into the agreement which they have with respect to the division of the waters of the Milk and St. Mary Rivers. I think that the representatives of both Governments can safely rely upon the members of the commission or citizens of both countries in determining what is material and what is not material. Anything that may throw any light upon the intent of the two Governments with respect to the division of these waters would not control, but it might assist the commission in arriving at a fair and equitable determination or judgment as to what the division of the waters should be. I do not think it is material one way or the other whether the correspondence goes in or is kept out, because it is the function of the commission to obtain this information by applying to the Governments directly. It does not seem to me to be a matter over which there could be any serious controversy, although my associates may not agree with me.

Mr. MACINNES. In all respect to that last proposition, I should like to go on record as excepting to that view. I understood that the commission would be more or less under the dictation of the Governments.

Mr. TAWNEY. I do not wish to be understood as saying that the commission is under the dictation of either Government, but I say that we are at liberty to obtain this information that is contained in the correspondence preceding the signing of this treaty, if we deem it material. It is simply a matter of the convenience of the commission to have it in the record for the purpose of ascertaining, if possible,

the intent of the two Governments in making this treaty with respect to an interpretation of Article VI regarding a division of these waters.

Mr. MACINNES. That would be entirely within the discretion of the commission.

Mr. TAWNEY. This is an inquiry and not a trial on a stated issue.

Mr. POWELL. What is the object of this?

Mr. WYVELL. This is for the information of the commission.

Mr. POWELL. That information must have some relevancy. What is the object of it?

Mr. WYVELL. It was started to be introduced by Mr. MacInnes, and I thought it was an excellent chance to furnish in one publication the entire correspondence on this one important matter. I will say that my views correspond exactly with those of the honorable chairman, and it could hardly be expected that the Government is submitting these things for the decision of the commission upon an important difference concerning the construction of the treaty, because that must come up on the request of the two Governments. This is an inquiry on the part of the commission to enable it to carry out its duty, and the United States is willing to submit its entire correspondence so as to guide the commission in the future. The files of the State Department are available. Why would it not be a good plan to have it accepted now and have it completely published?

Mr. GLENN. When Mr. MacInnes introduced his testimony I objected on the ground that I did not think it competent, and I have not changed my mind in regard to it. Now, you put in a great deal more, Mr. Wyvell, which I think is absolutely incompetent. If a part of it goes in I think it all should go in, but what they say or do will not control us.

Mr. WYVELL. That is true for the purpose of carrying out a division of water to be used by each country, but it can hardly be assumed that we would submit for a decision—that without request of either Government the commission is going to decide an important difference of opinion regarding the treaty.

Mr. POWELL. We have to take the treaty. We have no power to reframe the treaty any more than we could reframe an act of Parliament.

Mr. TAWNEY. Does this correspondence cover the consideration of this question preceding the making of this treaty?

Mr. WYVELL. Yes, sir; it is merely to complete the record. Mr. MacInnes read the first part of it.

Mr. MACINNES. I absolutely challenge that statement.

Mr. WYVELL. I think the record will bear me out in my statement that he referred to the drafts submitted by Secretary Root and that he read from them.

Mr. MACINNES. Excuse me. I did nothing of the kind. I gave the date when the proposal was made. I did not read any part of it or refer to any part of it which would lend any color to one side or the other.

I would like to reply to what Mr. Glenn has said. He knows perfectly well as a lawyer that there is an absolute distinction between evidence showing the position in which the parties were when they made a contract and evidence as to the drafts which passed between

them. The correspondence which I put in I am willing should go out except the dates. It deals only with matters of history. Now we are dealing with a wholly different matter. My learned friend is seeking to put in here, to influence the minds of the commission, perhaps, drafts unexplained by Mr. George Gibbons, Mr. Bryce, Mr. Root, and other eminent gentlemen connected with the matter.

Mr. GLENN. Mr. MacInnes, you read certain things with regard to the privy council, etc.

Mr. MACINNES. Perfectly true; but I did not read from any proposals or any draft treaty.

Mr. GLENN. I do not think he is.

Mr. MACINNES. This is the point we are now discussing, as to whether my learned friend should or should not put in drafts.

Mr. GLENN. He is reading from letters.

Mr. MACINNES. No; he is reading from various drafts.

Mr. MIGNAULT. I would say that they would not influence me, because if there is an elementary rule in the jurisprudence of both countries it is that drafts of an act of Parliament or of an act of Congress, the reports of a commission, for instance, which led up to the passing of an act of Parliament or an act of Congress, are irrelevant as evidence.

Mr. WYVELL. If your honor please, with all due deference to your honor's judgment and that of the commission, I think one of the first principles laid down by the early English writers is this proposition, that while you may not introduce evidence to contradict a written instrument, where the words are ambiguous, parol evidence to explain it must be taken and considered.

Mr. MIGNAULT. That is a different rule.

Mr. WYVELL. I am submitting this for the information of the commission and merely to complete the record which is now partially before you. It consists of various memoranda which passed between Dr. King and Mr. Newell.

Mr. POWELL. Are there many of them?

Mr. WYVELL. There are possibly eight or ten.

Mr. MIGNAULT. Perhaps you might read them, and then we can see whether they should go in or not.

Mr. GLENN. Why put in so much incompetent testimony, gentlemen? For diplomatic reasons, let it go in, but it would not go in before a court.

Mr. WYVELL. For the information of the commission, considering the Alaskan boundary situation, in which Great Britain was interested, I note the following:

It is to be noted in this case that the United States arbitrators placed great reliance upon circumstances surrounding the signing of the treaty they were called upon to interpret, as well as upon the official maps used by the countries in interest, and a long course of dealing which constituted a practical interpretation by all parties concerned.

Mr. MIGNAULT. That is another principle.

Mr. POWELL. That is a contemporaneous interpretation which stands by itself.

Mr. MIGNAULT. I do not want to exclude anything, Mr. Wyvell. I would rather that you have full latitude to put in everything you desire.

Mr. POWELL. The distinction between the two rests particularly on this: If you are putting in a draft of the treaty as showing what the treaty is, it is a very poor way of showing it by putting in something that the people rejected.

Mr. WYVELL. The circumstances, when a complete history of this is shown, will not bear that out at all.

Mr. POWELL. It would be quicker to put it in.

Mr. MIGNAULT. Let this go in subject to the objection. I do not want to exclude anything, because I want you to have full latitude to put in anything you wish.

Mr. WYVELL. I want to again state that this is for the information of the commission only.

Mr. MIGNAULT. I understand your purpose.

Mr. MACINNES. Then all I wish to say, Mr. Chairman, is that if he puts it in he puts it in at his own risk as to the inferences that are to be drawn from it.

(Mr. Wyvell thereupon introduced the following papers: A memorandum dated April 27, 1908, from Mr. King to Mr. Newell, upon the proposed diversion of water from St. Mary and Milk Rivers; a letter from Dr. King to Mr. Newell, dated May 1, 1908; a letter from Mr. Newell to Dr. King, dated May 9, 1908; a letter from Dr. King to Mr. Newell, dated May 13, 1908; a letter from Mr. Newell to Dr. King, dated May 25, 1908; a memorandum with a letter of transmittal from Mr. Newell to Dr. King, dated October 15, 1908; a memorandum submitted by Dr. King to Mr. Newell in reply to his memorandum of October 15, 1908, the date of Dr. King's memorandum being December 23, 1908; a draft submitted by R. H. Campbell, dated December 29, 1908; a draft submitted by F. H. Newell, December 29, 1908; and a draft submitted by Mr. Gibbons which was inclosed in a letter dated December 31, 1908; all of which papers are copied into the record in full, as follows:)

MEMORANDUM UPON THE PROPOSED DIVERSION OF ST. MARYS AND MILK RIVERS.

APRIL 27, 1908.

The proposals of the United States, set forth in the letter of the Secretary of State to His Majesty's ambassador, dated June 15, 1907, have been discussed in the minute of council of March 2, 1908. The following is offered in further explanation and amplification of the views expressed therein.

In view of the large area of arid lands situated in the basins of St. Marys and Milk Rivers, on both sides of the international boundary line, for the development of which irrigation is a vital necessity, it is thought that an agreement whereby all available water shall be utilized for the conversion of the present desert wastes to the fertility of irrigated fields, to the advantage of both countries, is in the very highest degree desirable. Such agreement, it is believed, to secure acceptance by the people of both countries, and to fulfill its purpose of obviating all possible future contentions, can best be based upon the principle of equal sharing of benefits to be derived from these international rivers, due regard being had to existing rights.

It is recognized that the proposal of the Secretary of State has been framed with the intention that these principles, which seem equitable, shall govern in the settlement of the question. This is manifested in the following provisions, with others of similar tenor:

1. During the summer months the waters of the rivers are to be apportioned to each of the two countries, from day to day, in equal amounts.
2. During the winter months the United States may store the waters of St. Marys River and Canada may store those of Milk River.
3. That vested interests in both countries shall be protected.

While the provisions here epitomized provide in their terms for equal division, it is, nevertheless, felt that there are certain considerations respecting them which ought to be taken into account.

Given equal supply to the two countries during the summer, full equality would be assured if the winter storage supply of Milk River were equal to that of St. Marys River.

This, however, is not the case. The average of five years' flow during the storage period of the proposal (Oct. 1 to Mar. 1) of the St. Marys River at the international boundary was 132,629 acre-feet, while the average of nine years' flow of Milk River at Havre was 47,789 acre-feet. (The amount at the intake of the Canadian canal would be much less than this.)

In December, 1904, the flow of Milk River was as low as 25 cubic feet per second at Havre, the stream then being, in fact, almost dry (actually dry at the intake of the Canadian canal).

Since by another provision the summer flow of Milk River is somewhat heavily taxed for the supply of existing irrigation ditches in the lower valley, it would appear that the share of Canada in the two river systems would be practically limited to one-half of the summer flow of St. Marys River.

While thus the share of Canada would be less than that of the United States, amounting to not more than one-fourth to one-third of the aggregate supply of the two rivers, it is further provided that the bed of Milk River, through Canada, shall be used to carry the water stored by the United States to the points where it is to be supplied to the land.

This places upon Canada the heavy liability of maintenance of the channel of Milk River. The erosion caused by the passage of a large body of water along it will be very great, and it is feared that it may result in rendering the valley of the river unfit for settlement.

The fact also should not be lost sight of that the diversion of a large part of the St. Marys waters to the basin of another river will be injurious in another way.

St. Marys River is a tributary of the South Saskatchewan River, which is a navigable river.

Diversion for irrigation of its headwaters may indeed in any case affect its navigability, but if the diverted waters are applied to land in the basin of the river, a considerable percentage will be returned to the river through seepage, and thereby the injurious effect on navigation will be less than if the waters were taken by the Milk River into the Mississippi drainage. Indeed, in the opinion of many authorities, the ultimate effect of irrigation of the basin of a navigable river is to improve its navigability, through restraint of the spring floods and the more constant supply later in the year.

It is thought that the dates proposed for the beginning and ending of the winter or storage period might, with advantage, be made somewhat later, to accord with the requirements of irrigation.

It is noticed that clause 5, in defining the share to which each country is entitled, seems to debar either country from using the water in excess of 2,000 feet flowing into its territory by St. Marys River and by Milk River at the eastern crossing of the boundary line, respectively. Under this provision apparently the excess water would be wasted, which is certainly undesirable.

With respect to the provisions for protection of existing rights it is said that the amount of water to which the settlers in the lower valley of Milk River are entitled is understood to be in excess of 350 cubic feet per second, although the exact amount awaits judicial determination.

From the measurements made by the United States Reclamation Service it appears that during the months of July, August, and September of the years 1898 to 1906 the average flow of Milk River at Havre, Mont., was 198 cubic feet per second.

This quantity being less than the reserved 350 cubic feet, the Canadian settlers on Milk River would, under the proposals, be entitled to no water whatever from the natural flow of the river during these months, while by another provision they would be debarred from taking any of the water passing from the St. Marys Lakes Reservoir.

The date mentioned in connection with the determination of the beneficial use on the lower Milk River is November 1, 1905. This, it is assumed, is the date at which the judicial proceedings referred to were initiated. It should be observed that the Canadian Milk River Canal was constructed in 1903.

The same date is applied in the following clause to the determination of the beneficial use by the Canadian company of the waters of St. Marys River.

The two cases are, however, not exactly parallel. In the case of Milk River settlers the date is that upon which proceedings were taken which had for their purpose the prevention of the acquirement of further rights to the waters of the river.

As to the Canadian company, however, the proposal is to terminate or limit existing rights, and this, it is submitted, can not be done, under the laws on either side of the boundary line, at a date fixed without the consent of the parties interested.

As is set forth in the minute of council previously referred to, the operations of the Alberta Railway & Irrigation Co. have been in pursuance of a consistent plan dating back many years. Their project contemplates the application to a certain tract of the water which they have been authorized under the irrigation act to take.

This authorization was not an improvident one, nor given without previous careful consideration. Before it was given, the fact had been ascertained by surveys made by the Government and the company that the authorized quantity of water could be applied beneficially and without waste. The company have prosecuted their works under their authorization with due diligence.

In these circumstances it is believed that under the laws as to reclamation of arid lands in force in Canada, as well as in many States of the Union, including Montana, the beneficial use by the company would begin at the initiation of the project, and that the amount of water beneficially used would be determined by the courts, as equal to the amount authorized, and thereby recorded against the stream.

These observations are respectfully submitted for consideration with a hope that some modifications may be made to the proposals of the United States in the directions indicated. It is the earnest wish of the Government of Canada that a mutually satisfactory settlement of this difficult question may be reached.

Very respectfully,

W. F. KING.

Mr. F. H. NEWELL.

THE SHOREHAM,
Washington, May 1, 1908.

Mr. F. H. NEWELL,

Director, United States Reclamation Service, Washington, D. C.

DEAR SIR: Referring to the memorandum, which I addressed to you on the 27th ultimo, I would say that its purpose was to discuss, from the viewpoint of Canada, your proposals relative to the diversion of the waters of the St. Marys and Milk Rivers. I now realize from the reading with you of your proposals that I entirely misunderstood some features of them. This makes it necessary for me to submit a new memorandum, and as you suggested the desirability of receiving my views as to a method of division more satisfactory to Canada, such will be found below.

The Alberta Railway & Irrigation Co. has made an appropriation of the waters of St. Marys River which would surely be held valid in the courts of Montana or of the United States, were the works of the company situated in Montana, or in another State of the Union.

This appropriation, made under the laws of Canada, covers the low water flow and up to 2,000 second-feet of the high or flood stages. This appropriation was not an improvident one. Before it was made, it had been ascertained that the stated quantity of water could be applied beneficially and without waste. The company have prosecuted their works under their authorization with due diligence.

While the fact that the works of the Canadian canal do not lie in the United States may involve difficulty in the establishment of the validity of the appropriation as against subsequent diversions in Montana, it would seem only fair and reasonable under the comity of nations, that St. Marys River should be undisturbed to the extent of allowing Canada to supply its commitments from that stream.

This seems to be in accord with the principle enunciated by the late Mr. Secretary Hay in a communication addressed to the British ambassador on February 19, 1903, in which he stated that "it is proposed to deal with this matter" (the diversion of St. Marys River in Montana) "in strict conformity with the laws concerning the rights to the use of water as recognized by the courts of the arid region both on this side of the boundary and on the other."

Leaving aside what appears to be a very serious question of undertaking to deplete the water supply of one international stream for the benefit of another, your proposal is that Canada relinquish its right to the difference between what it is committed to supply and one-half of the flow of the river, and shall further provide and maintain for you, for all time, a canal system, over 100 miles in length, being the channel of the Milk River, for the transportation of the amount you would withdraw from St. Marys River.

The withdrawal from St. Marys River would seriously affect vested interests in Canada, as previously referred to, and would hinder the natural development of the country, while the passage of a large body of water down the Milk River Channel might carry with it serious consequences.

Nevertheless, in the interests of friendly cooperation between the two countries, Canada is most desirous of reaching a settlement of this question, and to that end will be willing to recede to some extent from the position which it is believed she is entitled to take as to her rights, both on St. Marys and Milk Rivers. I accordingly submit for your consideration the following proposal:

That the United States shall be entitled to all the water of St. Marys River at the dam site of St. Marys reservoir, for storage during the months of January, February, March, November, and December in each year.

That Canada shall be entitled to divert from the natural flow of St. Marys River 1,400 cubic feet per second during the remaining months.

That the excess flow of St. Marys River during the last-mentioned period, above 1,400 second-feet, shall be divided equally between the two countries.

That the United States shall be entitled to all the water of Milk River during the months of January, February, March, August, September, October, November, and December of each year.

That Canada shall be entitled to divert from the natural flow of Milk River to the present capacity of the Canadian Milk River Canal, agreed upon as being 330 second-feet, during the months of April, May, June, and July in each year, subject to the rights of appropriation from the Milk River within the territory of the United States, as existing at the date of the Canadian Co.'s appropriation on Milk River (23d Oct., 1902), and now being judicially determined in the courts of Montana.

That the natural flow in the Milk River during the months of April, May, June, and July in each year in excess of the amount of 330 second-feet, together with the amount required as above by the appropriations in the lower valley, shall be divided equally between the two countries.

That the United States may use the channel of Milk River through Canada for the transportation from St. Marys River of the waters thereof to which they are entitled under the foregoing provisions, but shall be responsible for the proper control of the waters so transported.

Yours, very truly,

W. F. KING.

MAY 9, 1908.

Dr. W. F. KING,

Chief Astronomer, Ottawa, Canada.

MY DEAR DR. KING: Since you left here on May 8 I have been endeavoring to look over the hydrographic data in connection with your memorandum of May 1. The thing that strikes me first in looking over our figures is that the proposition you make would deprive us of storage in St. Marys Lakes during several years of low-water flow. I can not at present discuss this matter or make a counter proposition in the form of a memorandum, but hope to do so and to take up with you in correspondence a number of the details as opportunity offers. I am writing to you at this time to keep the matter alive and to let you know that I am considering these details.

Very truly, yours,

F. H. NEWELL, *Director.*

DEPARTMENT OF THE INTERIOR,
DOMINION ASTRONOMICAL OBSERVATORY,
Ottawa, Canada, 13th May, 1908.

F. H. NEWELL, Esq.,

Director, United States Reclamation Service,

Washington, D. C.

DEAR MR. NEWELL: I beg to acknowledge receipt of your letter of the 9th instant, in which you point out that the plan of division I suggested would deprive you of storage in St. Mary Lakes in low-water years.

You would in any event get the whole of the winter flow of St. Mary River, whatever that would be. It is no doubt true that in low-water years your share of the total flow of the year would be diminished relatively to ours, but the contrary would happen in high-water seasons, when our share would not be increased above the average amount as much as yours would be. I should think some part of the variation might be obviated by keeping water in storage.

I shall be glad to hear from you on this point when it is convenient for you.

Yours, very truly,

W. F. KING, *Chief Astronomer.*

MAY 25, 1908.

Dr. W. F. KING,

Chief Astronomer, Ottawa, Canada.

MY DEAR DR. KING: Your letter of May 13 has been received, regarding storage in St. Mary River. I am endeavoring to have the details computed, so that I can discuss the matter more intelligently with you, but so far the results do not appear favorable.

I am trying to make arrangements so that I can suggest a definite time to you when we can meet on the St. Mary River, but you have probably noticed by the papers our Congress has not yet adjourned and I am still submerged in the details in which you found me engaged.

Very truly, yours,

F. H. NEWELL, *Director.*

OCTOBER 15, 1908.

MY DEAR DR. KING: Referring to your memorandum of May 1, on the St. Mary-Milk River matter, I now inclose certain comments which I hope you will consider and send a reply to me at Washington, so that I can take up the details when I return to the city in December.

Very truly, yours,

F. H. NEWELL.

MEMORANDUM FOR CONSIDERATION BY DR. W. F. KING ON ST. MARY-MILK RIVER MATTERS, OCTOBER 15, 1908, IN REPLY TO HIS MEMORANDUM OF MAY 1, 1908.

The following notes have been prepared to review the fundamentals and to facilitate discussion leading to a clearer understanding of the problems presented by the international features of the St. Mary and Milk Rivers in northern Montana and southern Alberta.

PHYSICAL CONDITIONS.

St. Mary River rises in the United States and flows north into Canada. On its headwaters in Montana are natural lakes, whose utility as storage reservoirs can be increased at relatively small cost. Much of the natural and stored flow can be diverted by a canal now under construction by the United States and taken east to or across the headwaters of Milk River to land in the eastern portion of the Blackfeet Indian Reservation or farther east.

About 3 miles north of the international border, a canal built under authority of the Canadian Government diverts most of the low-water flow to irrigate lands near Lethbridge in Alberta. This canal is being gradually enlarged from a capacity of about 385 cubic feet per second. It can be used not only to irrigate lands directly but also to take water to natural basins or storage reservoirs within or near the irrigable areas.

Milk River rises in foothills east of the head of St. Mary River. It flows northeasterly into Canada, and after continuing in narrow valleys in a general way parallel with the boundary for about 150 miles, turns southerly and crosses back into Montana, finally entering Missouri River. It has few, if any, economical storage sites, and its flow is relatively small and irregular. All of its available summer flow was early appropriated and put to beneficial use in irrigation under the laws of the State of Montana.

The Canadians have also built, in 1904, a canal to take water from this river northerly to the vicinity of Lethbridge, but this canal has not been used and its headworks were washed out in the floods of May, 1908.

DEFICIENT WATER SUPPLY.

There are larger areas of irrigable land in the United States and in Canada than can be supplied by the waters of these rivers, even if the floods are stored in the available basins. The greatest immediate demand for water is in Milk River Valley in Montana where the irrigating ditches and canals already completed are occasionally unable to obtain a needed supply for the lands in crop. This urgent demand for water gives rise to numerous questions as to where the streams shall be diverted and used.

PRINCIPLES GOVERNING DISTRIBUTION OF WATER.

The doctrine of priority of appropriation has been generally recognized in the legislation and judicial proceedings of arid countries. Under it, first in time gives first in right. If the rivers under consideration were entirely in either country this principle would undoubtedly govern, but it has also been held that each country being independent may not recognize any servitude in the waters which occur in that country in favor of the other. Canada, in the opinion of citizens of Montana, has been the aggressor in granting or attempting to grant the waters of Milk River to a corporation, although those waters were already appropriated and used under the laws of the State. A mass meeting to protest against the construction of the Canadian Milk River Canal was held at Chinook, Mont., on February 13, 1904.

The decision of the matters at issue hinges mainly on the question as to which of these principles shall predominate, namely, priority of use, or independence of foreign claims. The first necessitates a full and mutually beneficial agreement, necessarily somewhat complicated. The second needs no further treaty, but will involve large and possibly unnecessary expenditures on the part of each country.

INDEPENDENT ACTION.

The United States will probably be most benefited in its future growth by absolute independence in handling the water which arises or occurs in its territory. The first outlay will be large, as the works for water storage and diversion will be expensive. They are already under way, however, and public sentiment seems to be in favor of their future extension regardless of immediate returns. Their full development will ultimately result unfavorably to Canadian interests in years of low water supply. For these reasons, viz, first, to secure greater economy in construction and operation, and, second, to promote comity with Canada, an attempt has been made to bring about an amicable and mutually beneficial arrangement to be confirmed by treaty with Great Britain.

HISTORY OF NEGOTIATIONS.

The protest of citizens February 13, 1904, to the President of the United States to take active measures to protect their interests in the waters of Milk River, Mont., was referred by Hon. John Hay, Secretary of State, to the Department of the Interior, and was reported upon by the Director of the Geological Survey at that time in charge of the Reclamation Service. It was then urged (Mar. 12, 1904) that every possible means be taken to secure an equitable settlement of the question.

On July 15, 1904, the British ambassador transmitted a note covering an approved minute of the Privy Council of Canada of July 8, 1904, stating that the Canadian minister had allotted 1,500 second-feet of Milk River flood waters and 500 second-feet of low-water flow.

On August 31, 1904, Mr. F. H. Newell, then Chief Engineer of the United States Reclamation Service, visited Lethbridge and other points in Canada, discussing the physical situation with Mr. E. T. Gault, president of the Canadian Northwestern Irrigation Co., who were building the canals from St. Mary and Milk Rivers.

About October 10, 1904, a suitable note was addressed by the Secretary of State to the British ambassador to the end that every possible means be taken to secure an equitable settlement.

On December 30, 1904, Secretary of State John Hay addressed a note to the British ambassador, Sir B. M. Durand, calling attention to the conditions existing and suggesting a conference of representatives.

In May, 1905, Mr. C. E. Grunsky, consulting engineer of the United States Reclamation Service, visited Lethbridge, Canada, for the purpose of reviewing the conditions.

On June 1 and 2, 1905, a general but unofficial discussion was had at Washington, D. C., between Messrs. C. D. Walcott, Director United States Geological Survey; F. H. Newell, Chief Engineer United States Reclamation Service; A. P. Davis, assistant chief engineer; Morris Bien, supervising engineer; and Messrs. E. T. Gault and C. A. Magrath, representing the Canadian Northwest Irrigation Co.

It was suggested that the available water of both streams be divided equally between the two countries, and details were considered as to methods of arriving at an equal division.

On August 2, 1905, Sir H. M. Durand, British ambassador, replies to Secretary of State John Hay's note of December 30, 1904. He transmits an extract from a report of the committee of the privy counsel approved by the Governor General on June 7, 1905, recommending that the United States Reclamation Service "suggest such a plan for the settlement of all questions in reference to the waters of the St. Mary and Milk Rivers as would be acceptable to both countries."

On November 11, 1905, a plan as noted above was submitted to the Department of the Interior.

On June 15, 1907, the plan above proposed was transmitted by Secretary of State Elihu Root to Hon. James Bryce, ambassador of Great Britain. This was discussed in minute of council of March 2, 1908.

On March 10, 1908, Hon. James Bryce transmits a copy of this minute and suggests that representatives be designated with the object of considering the basis of an agreement to be submitted to the respective Governments.

On March 24, 1908, Mr. F. H. Newell, Director United States Reclamation Service, was designated, and on April 14 the Secretary of State announced that Dr. W. F. King, chief astronomer of the Dominion, had been appointed representative of the Canadian Government for the purpose named.

On April 27, 1908, Messrs. King and Newell met and discussed various memoranda. On May 1 Dr. King presented his views. It was decided to look over the ground together, and on August 21 to 25 they proceeded down St. Marys River from the lakes to Kimball, Alberta, and down North Fork of Milk River, and along Milk River to a point about 10 miles east of the Alberta Railway in Canada.

PRIMARY ISSUE.

The primary question which has stimulated action has been the demand of the citizens of Montana that the waters of Milk River, including its tributaries, shall not be diverted in Canada to their injury; and more than this, that the available water supply shall be increased, if possible, by local storage or by diversion of some of the stored waters of St. Marys River. The action of the Canadian Government in granting the waters aroused great indignation, but the destruction of the headworks of the Canadian Milk River Canal by flood in May, 1908, has allayed popular feeling. If these works should be restored, there may be another general protest.

The United States Government has planned local storage works on Milk River and has begun construction of a flood or high-water canal heading at Dodson, Mont. This will be gradually enlarged and extended, as opportunity arises.

This flood-water canal is, for the present at least, in lieu of the original plan of diverting water from St. Marys River to Milk River. In other words, the negotiation to protect the diversion of water from St. Marys River to and down Milk River have been so prolonged that for the time being, at least, this scheme of supplying the lands along Milk River in Montana has been laid aside and the people are and probably will remain tranquil unless Canada rebuilds the Canadian Milk River Canal heading.

In the meantime work is progressing slowly but steadily on the St. Marys diversion canal, with a view to using the waters on the Blackfeet Indian lands and adjacent areas in Montana.

The primary issue is thus quiescent, but the need of definite determination of future policy is no less urgent.

PLAN OF 1905.

The principal feature of the plan of November 11, 1905 (sent to Hon. James Bryce June 15, 1907), is the equal division of available waters. To define or regulate this distribution certain rules are suggested; these are subsidiary to the general scheme of equal share. This is regarded as extremely liberal, as nearly all the waters arise in the United States. In return for protection of an equal share of the flow the United States suggests that Canada give safe conduct down Milk River for the share of stored water falling to the United States. Unfortunately, the Privy Council minute of March 2, 1908, seems to indicate that Canada is not satisfied with this proposition based on equality. It is not believed that any proposal to give Canada more than half the water can be entertained, although the details as to how this half may be ascertained are open to discussion.

COMMENTS ON PRIVY COUNCIL MINUTE OF MARCH 2, 1908.

First. "That the Government of the Dominion was appealed to many years ago by persons interested in southern Alberta to develop that district by a canal system to divert water from St. Marys River, and finally decided to take action in the matter after reaching the conclusion from the reports of its own officers and other engineers that the diversion of the St. Marys River could not be carried out in the United States as a commercial undertaking."

This conclusion evidently did not take into account the fact that such diversion was feasible and has been demanded for many years by public sentiment and petition by citizens of the United States. The surveys begun in 1900 have been steadily followed up, and on March 25, 1905, the sum of \$1,000,000 was allotted to begin the work now being carried on. The fact that the Dominion Government took upon itself the determination as to how the waters should be used without consulting the United States and that it has attempted to dispose of the waters of Milk River which rise in the United States and pass through a part of Canada, has aroused a very deep feeling. This is steadily aggravated by the fact that Canada is permitting the tributaries of Milk River to be diverted, namely, West Fork or Willow Creek, North Fork or Battle Creek, Frenchman Creek or White Water, and Rock Creek, in spite of the fact that these waters have been appropriated under the laws of Montana and already put to beneficial use.

Canada having set the example of taking all the water it can without considering vested rights, it follows that the United States may adopt the same policy with even greater vigor, when public opinion is fully aroused, and keep all of the available waters in its own territory. This, as above stated, will necessitate large expenditures, but the ultimate result, it is believed, will justify these, if a more mutually beneficial course can not be followed."

Second. "That in so dealing with this project the Government has innocently created vested rights under the laws of the Dominion."

In a previous note of June 7, 1905, the privy council states in reply to questions as to the allotment of these waters by the Dominion authorities, that it "has not yet made a final determination as to these facts, such a determination being as yet unnecessary in view of the fact that a license will not be issued to the Alberta Railway & Irrigation Co., which has authority to divert water from these streams, until the completion of its work within the period allotted to it." From this it would appear that the vested rights are still inchoate and subject to modification.

"There is a somewhat indefinite prior claim on behalf of the settlers on the lower Milk River which the treaty proposes to recognize and which apparently may at certain seasons allow Canadians no use whatever of the water of Milk River."

This "somewhat indefinite prior claim" is and has been the inciting cause of the negotiations, and failure to recognize these claims has resulted in most of the general irritation in Montana over the course pursued by the Dominion authorities.

Fourth. "Moreover, the draft treaty provides for the carriage of a very large volume of water by the channel of Milk River in Canada, all of which water must be allowed to pass through to the United States, while the Canadians use is restricted to a part only of the natural flow, which in the low-water period is very small. It is felt that the concession asked from Canada in this regard is a very great one, in view of the difficulties which may arise from the restrictions thus placed upon the settlers on the banks of the river, and of the

liability of damage to property from the increased height of water, and that there is not sufficient compensation allowed in the treaty for such concession."

On the contrary, it is believed that the compensation offered is extremely liberal for what is regarded as a relatively small concession. The securing to Canada by treaty of half of the water will be in the future the foundation of great and permanent development as against the uncertainty which must otherwise prevail of getting water when most needed in dry years. If no definite agreement is reached, the United States can and doubtless will in the course of time, following the example set by Canada, take more and more of the waters and regulate the storage works on St. Mary Lakes to suit the convenience of its citizens—taking the water into and out of the head of Milk River. In wet years there will probably be no scarcity, but in very dry years all will clamor for water. Unless protected by treaty and a well-devised system such as proposed, the Canadian interests must be secondary.

The existence of regulating works on St. Mary Lakes will also be beneficial in modifying floods. The loss of the Canadian dam near Kimball would probably have been obviated if these works had been finished. In short, the compensation means millions of dollars of permanent value to Canada as against a concession which appears trivial.

The amount of water which it is proposed to carry in Milk River is less than that flowing in flood. In other words, it is planned to prolong moderate high water during the summer by a steadily regulated flow. This following the regular flood of spring will keep the channel free from deposits and maintain uniform conditions, provide stock water, and may be of benefit to the sparse population living in the small, narrow valleys. There is no property to be damaged along the river as the spring floods are higher than the proposed regulated flow and no restrictions are to be placed on the settlers on the banks as their needs for water are confined to stock watering and domestic supply, there being no irrigable areas of any considerable amount.

Fifth. "That the division of the waters of the St. Marys and Milk Rivers on the terms suggested in the draft treaty would, in practical operation, result in the Dominion of Canada receiving a less proportion of the water than that to which this country is equitably entitled as, although the rights given to the United States over the waters of St. Marys River are, in terms, balanced by rights given to Canada with respect to Milk River, the latter river is by no means equal in volume of constancy of flow to St. Marys River."

It seems from the above that the Privy Council did not fully comprehend the proposed terms. On account of lack of equality of these rivers it is proposed in Article I to treat them as parts of a single drainage system. This results from connecting them, storing the excess water and dividing the summer flow equally, giving each country half. The council does not indicate as to how much water it considers that Canada is "equitably entitled," but it has been tacitly assumed that if Canada had half this is more than strict equity demands.

COMMENTS ON DR. KING'S MEMORANDUM OF MAY 1.

"It would seem only fair and reasonable, under the comity of nations, that St. Marys River should be undisturbed to the extent of allowing Canada to supply its concomitants from that stream."

This refers to the principle which should be adopted for mutual benefit and applied within bounds of equity. Canada, it is believed, has violated it in regard to Milk River and its tributaries and is invoking its benefits on St. Mary River after it has attempted to create future vested rights to practically all the available flow. The Dominion Government has apparently granted inchoate rights to all the water of low years and now asks that these be allowed to mature to an extent which will hinder the natural development of the United States. We can hardly agree that Canada, without considering the needs of the United States, can apportion all the available water and then demand that its action be confirmed on the ground of comity.

There can be little objection to allowing the priority of the Alberta Railway & Irrigation Co. to the waters it has already diverted and put to beneficial use "in strict conformity with the laws concerning the rights to the use of water as recognized by the courts of the arid region," as this will fall well within a half of the available supply, but to go further and say that the company may in the future take practically all the water seems to be stretching this matter too far.

Proposal 1. "That the United States shall be entitled to all the water of St Marys River at the dam site of St. Marys Reservoir for storage during the months of January, February, March, November, and December in each year."

These are the winter months when streams are frozen and very little water flows. This concession is of little value, as it is questionable whether any storage works could be opened to let the water out even if desired.

Proposal 2. "That Canada shall be entitled to divert from the natural flow of St. Marys River 1,400 cubic feet per second during the remaining months."

This virtually gives to Canada all the available water, as it leaves only the peaks of the irrigation floods to be divided to the United States. The amount of 1,400 second-feet is far in excess of present development in Canada, and if allowed would simply promote further development at the expense of similar growth in the United States.

The only fixed amount which can be considered in lieu of 1,400 second-feet is a figure which approximates one-half the natural available flow; i. e., after excluding the peaks of the floods. In former discussions, 2,000 second-feet has been assumed as the flood line, and under this assumption Canada's half would be one-half the average daily flow of 2,000 second-feet or less.

Proposal 3. "That the excess flow of St. Marys River during the last mentioned period above 1,400 second-feet shall be divided equally between the two countries."

This can not be accepted, as it practically amounts to saying that after Canada has taken the best part of the stream—in all, four or five times the amount now being used—then what is left, if any, may be divided. The only proposition that seems fair is that the flow shall be divided and then Canada may fill the vested priorities out of her half.

Proposal 4. "That the United States shall be entitled to all the water in Milk River during the months of January, February, March, August, September, October, November, and December of each year."

These are the months when the river is frozen in whole or part or is nearly dry following the spring flood, and is the period when irrigation is practically impossible. This concession is therefore of little practical value.

Proposal 5. "That Canada shall be entitled to divert from the natural flow of Milk River to the present capacity of the Canadian Milk River Canal, agreed upon as being 330 second-feet, during the months of April, May, June, and July in each year, subject to the rights of appropriation from the Milk River within the territory of the United States as existing at the date of the Canadian company's appropriation on Milk River (23d Oct., 1902) and now being judicially determined in the courts of Montana."

This latter amounts to practically 359 second-feet. This proposal, as understood, gives the United States, during April to July, inclusive, 359 second-feet, then Canada 330 second-feet. This seems to be fair and in line with the principles which it is desired to follow.

Proposal 6. "That the natural flow in Milk River during the months April, May, June, and July in each year in excess of the amount of 330 second-feet, together with the amount required as above by the appropriation in the lower valley, shall be divided equally between the two countries."

This is considered a desirable agreement.

Proposal 7. "That the United States may use the channel of Milk River through Canada for the transportation from St. Marys River of the waters thereof to which they are entitled under the foregoing provisions, but shall be responsible for the proper control of the waters so transported."

This appears to be all that could be desired, as it meets the primary issue of supplying more water to lower Milk River Valley.

COUNTER PROPOSALS.

Referring back to proposal No. 2, it is assumed that the Canadian St. Mary Canal has now a capacity of, say, 385 second-feet of water, which it is putting to beneficial use. Calling this 400 second-feet, this may be considered a prior appropriation which is now earned. Let this amount be conceded, and after this is assured let the United States have an equal amount. Then Canada take, say, 200 or 400 second-feet more, and the United States an equal amount, and so on until the available flow is absorbed, by recognizing the rights first of Canada and then of the United States to an equal amount. This will protect the prior rights in Canada in the same way that proposal 5 protects those on Milk River in the United States.

MEMORANDUM FOR MR. F. H. NEWELL IN REPLY TO HIS MEMORANDUM OF OCTOBER 15, 1908.

Memorandum for Mr. F. H. Newell in reply to his memorandum of October 15, 1908.

At the outset it seems desirable to correct a misapprehension as to the attitude of Canada in the matter upon which Mr. Newell's argument as to the equities of the case seems largely to be based.

His "History of negotiations" begins only at February 13, 1904. Before this date a number of diplomatic communications passed which, with the circumstances which led to them, should be considered in relation to the statements that the Canadian Government took upon itself to determine how the waters should be used without consulting the United States, and that Canada has set the example of taking all the water she can without considering vested right.

Canadian surveys having in view the systematic development of her western country by irrigation were begun in 1894, and in 1895 a location was made for the St. Marys River diversion canal.

In September of the same year the International Irrigation Congress of the United States at their meeting at Albuquerque, N. Mex., passed a resolution asking for the appointment of an international commission to determine questions of the use for irrigation of the waters of streams of an international character.

On January 8, 1896, the Canadian Government by minute of council, which was transmitted by Her Majesty's ambassador to the State Department at Washington, invited consideration of the resolution of the irrigation congress and expressed the desire of the Government of Canada to cooperate.

The Secretary of State replied regretting his inability to give expression to the views of his Government upon the subject at the time.

At this date location had been made of the proposed canal, but construction had not been begun. Thus before final action the Canadian Government invited consideration of the international features of the situation. It is not known what further consultation with the United States was required by international comity, or indeed would have served any practical purpose since apart from the question of the division of the waters between the two countries, which the Secretary of State was unable at that time to discuss, there remained only the details of administration in Canadian territory under the law.

In these circumstances the Dominion Government was obliged to proceed independently, in compliance with the public demand, for development of a large tract of country conveniently situated for development by diversion from St. Marys River.

Accordingly, in 1898 an arrangement was made with a company to undertake the construction and management of the canal, this being preferred to the original plan of construction and operation by the Government itself. The company proceeded at once with the work, which they have since prosecuted with all diligence, looking to the utilization of the waters allowed them under their contract with the Government. Originally built with a capacity of 400 second-feet, the canal has gradually been enlarged, up to at least 800 feet at the present time. In view of the projected diversion by the United States Government, under the reclamation act of 1902, of water from St. Marys River, the Canadian Government, by minute of council of October 27, 1902, again urged consideration of the question in its international aspect, but unsuccessfully. It was again obliged to proceed with its plans for development without the international consultation it desired.

It was found that an extensive tract of land lying north of Milk River could be irrigated from it. While that river ordinarily runs too low during the months when irrigation is most required to justify a large expenditure on a canal for direct service, it was found that excellent natural facilities for storage existed, by means of which the high water of other months could be made available.

Accordingly the Milk River Canal was built within Canadian territory and in pursuance of a plan of needed development. It was not intended for the conveyance of the water at low stages of the river, but of the excess water only; in this regard reference may be had to the memorandum of the Secretary of State of the United States, of date May 9, 1904, in which he says, speaking of this canal, that "the diversion of the water in the upper part of the stream

in Canada will work no injury during the time of floods" (to the settlers on the lower Milk River).

In a later memorandum the Secretary sets forth the hardships which would be entailed upon the settlers down the river by the stoppage of their supply of water and expresses the hope that the Canadian Government will not persist in the diversion. In compliance with the request of the United States Government and in the spirit of respect for existing interests, the canal has not been put in operation, even at times of high water.

As to diversions in Canada from the four tributaries of Milk River mentioned in Mr. Newell's memorandum, the authorizations have been restricted to the actual necessities of individual settlers. The authorizations, with the strict system of inspection, operate as a restraint against excessive use of water, rather than the opposite.

The Canadian Government would have been ready to consider any representations made on behalf of the settlers on these creeks south of the boundary line, but none appear hitherto to have been made, and not even in the draft treaty of 1907 nor in Mr. Newell's present memorandum is any remedy proposed on their behalf. Under clause 5 (c) of the draft treaty, Canada would apparently be entitled to all the flow of these streams north of the boundary line, accounting therefor only by a greater supply to the United States in the main channel of Milk River, not in these tributaries, a compensation which would not seem to be of service to the settlers on the creeks, away from the immediate valley of the river.

It is believed that the foregoing will show that the attitude of Canada has not been arbitrary or disregardful of the rights of the United States and its citizens, and it is hoped that the explanations which have been made will operate to free the discussion from considerations extraneous to the proper purpose of the present negotiations, which is the adjustment of the matter under the conditions which now exist.

The central idea of the proposal of May 1, 1908, was a balancing of benefits and concessions while making provision for existing appropriations. In working out the idea, it was thought to offset the reservation on St. Marys River in favor of the Canadian company by allotting to the United States the flow of St. Marys River during five winter months and that of Milk River during eight months, with a greater share of the water of the latter river during the four remaining months. To this was added the right to the United States to use the channel of Milk River through Canada for the passage of their share of the water of St. Marys River.

This was thought to be an equitable arrangement. It is, however, not satisfactory to Mr. Newell, who while signifying his acquiescence to certain clauses of the proposal rejects others. As his rejection touches a vital point of the principle of the proposal, namely, the balancing of concessions by payment in quantity of water, reconsideration of the whole proposal is necessary.

It seems desirable, in the first place, to agree upon a general principle of division of the water. The wide variance between the proposals of the parties to the present discussion seems to show the disadvantage of dealing with complicated details without a definite fundamental principle to guide.

The principle of equal sharing of benefits, with compensation by quantity of water, suggested by the undersigned, doubtless has a disadvantage in depending for its application upon agreement as to details.

A principle which is free from this objection, and is, moreover, a simple one, is that of equal division of water on the boundary streams (each country providing for its existing interests out of its share of the water).

Mr. Newell appears to prefer this principle, though he does not state definitely that he accepts it as a guiding one, and some of his suggested amendments to the proposal of May 1 do not accurately accord with it. A similar objection lies against the draft treaty, which purported to be based upon the principle of equal division but in its details did not well provide for carrying it out in practice.

Will Mr. Newell state his assent to this principle as a basis for the negotiations?

Respectfully,

W. F. KING.

OTTAWA, CANADA, 23d December, 1908.

DRAFT BY R. H. CAMPBELL.

DECEMBER 29, 1908.

(1) In all streams which cross the international boundary, the waters of which are used for irrigation, each country shall be entitled to the use of half the total natural flow as ascertained by measurement at the point or points where such streams cross the international boundary. "Natural flow" means the flow of each river system from all its sources which would pass the point or points indicated herein if no artificial obstruction had been placed in the stream or any of its tributaries or sources and if no water had been diverted from or added to the flow before reaching the point or points indicated.

(2) The determination of the natural flow, the measurement of the water to be shared, the method of delivery or distribution of the share of each country, the regulation of the carriage of stored water, and any and all other matters relating to the distribution of water used for irrigation from streams which cross the international boundary shall, in so far as they affect the interests of both countries, be subject to the control and regulation of the commission.

(3) Subject to such regulations as may be established by the commission, each country may divert, store, or use its share of the water of any stream so divided in such manner as to it may seem best.

(4) Rights to the use of water for irrigation now or hereafter established within the territory of either country on any stream which crosses the international boundary shall not be a charge on the share of the other country.

(5) The failure of either country to fully exercise the right agreed upon to have the total natural flow of streams which cross the international boundary or the use by either country of more than its share shall not add to or diminish the right of either country.

(6) If as a result of the construction or operation of works for the carriage or storage of water for irrigation from any stream which crosses the international boundary, or as a result of the total or partial destruction or breaking away of such works, loss or damages caused to the property of either country or to the property or persons of the citizens of either country, the Government of the country in which the works from which the loss and damage has resulted are situated shall be responsible for the payment of the amount of such loss or damage as determined by the commission, and the commission shall have authority to take such steps as may be necessary to ascertain the amount of such loss or damage.

(7) When water is diverted from one stream or watershed into any other stream which crosses the international boundary the country within which such diversion is made shall be responsible for the payment of the amount of such loss or damage as may be determined by the commission to have resulted from the increased flow of water in such stream, and of the amount of such expenditure as may be determined by the commission to have been made necessary to provide for the safe and convenient crossing of the stream in consequence of such increased flow, and the commission shall have authority to take such steps as may be necessary to ascertain the amount of such loss, damage, or expenditure.

DRAFT PREPARED BY F. H. NEWELL.

DECEMBER 29, 1908.

That the waters of each stream flowing across the international boundary shall be divided equally in quantity as nearly as practicable between the two countries; that is to say, the waters of St. Mary River and its tributaries crossing the international boundary shall be measured as they cross the boundary and an equal amount apportioned to each country, due allowance being made for the quantity stored above the point of measurement in reservoir or reservoirs constructed by the United States; also the waters of the north and south branches of Milk River shall be measured where they cross from the United States into Canada, and the main Milk River and its tributaries measured where they cross from Canada into the United States, allowance being made for any water diverted or stored in either country before reaching the points of measurement.

Inasmuch as the water of the rivers have widely different values at different times of the year, and have especial value during the irrigating season, this latter shall be taken as including the time from April 1 to September 30.

A priority to the right to the use of a portion of the water of St. Mary River shall be recognized as appertaining to Canada to the amount of 400 second-feet, the amount now put to beneficial use; and, thus in the event of the natural flow of St. Mary River at the international boundary being less than double this amount—namely, 800 second-feet—then the United States shall waive for the time being its claim to the full equality of the natural flow during the irrigating season as above defined, and shall permit a full flow of 400 second-feet to pass the boundary, providing this is furnished by the stream in its natural condition; that is to say, water shall not be allowed to increase in any reservoir or reservoirs constructed by the United States, but the entire natural flow shall be allowed to pass without storage or diversion through the reservoirs without accumulation therein until the stream yields at the international boundary 400 second-feet, but the United States does not assume any obligation to maintain this priority of 400 second-feet by means of water previously stored.

On the Milk River, also, there shall be recognized as existing a priority in the United States to an extent of 359 second-feet of the natural flow of Milk River, and this amount of the natural flow shall be allowed to pass from Canada into the United States without diminution of the natural flow of the stream during the irrigating season when the river and its tributaries yields this quantity or a less amount. Canada assumes no obligation to supply any natural deficiency in Milk River to maintain 359 second-feet, but shall divert no water when the flow falls below this amount.

After the priorities above described have been provided for each country shall be permitted to divert water in excess of the priorities to an amount not exceeding one-half the natural flow of the streams. In computing this one-half the priorities above described shall be included; that is to say, the 400 second-feet in Milk River shall form a portion of the one-half of the river allotted to Canada, and the 359 second-feet, or as much thereof as is obtainable from the natural flow shall be considered as part of the one-half of Milk River waters.

Neither country, however, assumes responsibility in case of deficiency in any year of supplying the balance from storage to make the quantities exactly equal.

During the winter months, or nonirrigating season—that is to say, from October 1 of each year to March 31 of each year—the United States may store in reservoir or reservoirs all of the water obtainable on the headwaters of St. Mary River, providing that the aggregate of said storage shall not exceed one-half the total annual flow of the river.

In the same way Canada may store on the headwaters of Milk River during the nonirrigating season all of the waters of Milk River, providing that the total amount does not exceed one-half the natural flow of the stream. In case of excess of one-half, the reservoirs on either stream shall be operated to release sufficient water to equalize the total during the year.

In consideration for this equal division Canada will permit the United States to send down through the channel of Milk River undiminished in quantity the water which may have been stored by the United States in its own territory.

The United States shall make compensation to the owners of land along Milk River in Canada for actual damages resulting from the conveyance of stored water through the channel of Milk River, due to washing away of land or difficulties in crossing the stream. Said damages shall be ascertained by making an appraisal of the value of the lowlands which may be affected along the course of the stream within six months from the signing of the treaty. After the completion of the storage and diversion works in the United States and the turning down of water through Milk River, then another valuation shall be made of the bottom lands, and on the basis of any decrease in value over the first valuation the United States shall make indemnity to the owners of the land.

DRAFT RECEIVED FROM MR. GIBBONS WITH HIS LETTER OF DECEMBER 31, 1908.

ARTICLE VI. It is agreed that for the use of irrigation the St. Mary and Milk Rivers (in the State of Montana and the Province of Alberta) and their tributaries are to be treated as one stream, and the total amount that can be diverted from the two for such purpose is to be distributed so that each country shall have the right to one-half of the whole, but in the distribution more may be taken from one stream and less from the other by each country, so as to afford a more beneficial use to each.

It is agreed that there exists on the part of Canada the right to a prior appropriation of 360 second-feet of the flow of St. Mary River during the irrigation season between the 1st of April and the 31st of October, inclusive, annually, and that there exists a similar right on the part of the United States to a prior appropriation of 360 second-feet of the flow of Milk River during the said irrigation season.

The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of the waters of St. Mary River stored in the United States. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance through the Milk River of the waters from the St. Mary River.

The measurement of the water so to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of Canada under the direction of the International Joint Commission of the United States and Canada.

Mr. MACINNES. My information as to this draft is that it was one received by Sir George Gibbons from Mr. Chandler Anderson.

Mr. WYVELL. No; it was just the reverse.

Mr. MACINNES. Somebody has put a statement at the top there, but my information is that it was to Mr. Gibbons by Mr. Anderson.

Mr. WYVELL. The information that I have is that it was sent by Mr. Gibbons to Mr. Anderson in a letter dated December 31, 1908.

Mr. MIGNAULT. Could that be cleared up in any way?

Mr. WYVELL. Well, that is my information from Mr. Anderson.

Mr. MIGNAULT. Are these copies certified?

Mr. WYVELL. No; they are not certified.

Mr. MIGNAULT. It is not that I raise any question, but there may be a misapprehension. So far as it could be used, it would be very material to know whether it was a draft by Mr. Gibbons or a draft by Mr. Chandler Anderson.

Mr. WYVELL. My information is that it was a draft received by Mr. Anderson from Mr. Gibbons. However, it does not make very much difference, I think. It was an expression of views between the two at the time. I wish also to introduce a draft submitted by Mr. Anderson early in January, 1909. Unfortunately, it is not dated.

Mr. MACINNES. This one, I submit, can not go on the records of the commission until it has been verified. It has never been seen on our side at all.

Mr. WYVELL. If it is understood that we can submit these later, I can get them in a little better shape. Up to this time I am absolutely certain as to the passage of the correspondence. From this point on, owing to the absence of dates on these drafts, there is some uncertainty.

Mr. MACINNES. I know my learned friend intends to be entirely fair. He has already put in certain drafts. This draft is from an original draft and, therefore, it could not be subsequent to the ones he has already put in.

Mr. WYVELL. I have not put in any original drafts by Mr. Anderson, I think. I said an original draft by Mr. Gibbons.

Mr. MACINNES. I wish to make it perfectly clear to the commission that I am not seeking in any way to take advantage for Canada in the exclusion of anything. I do not know that this hurts or helps one country more than another, but I would like to know where it came from.

Mr. MIGNAULT. Under those circumstances, it might be more regular to have certified copies.

Mr. TAWNEY. To what does it relate?

Mr. WYVELL. To this part of the treaty. Mr. Anderson has a record of several drafts, which I carefully looked over before coming from Washington. These drafts were copied and sent to me, and they, unfortunately, bear no date; and the drafts in his office bear no date. There is no doubt about anything down to this point.

Mr. MIGNAULT. Is there any evidence that these drafts by Mr. Chandler Anderson were communicated to Mr. George Gibbons?

Mr. WYVELL. Yes; they were in conference at the time.

Mr. MIGNAULT. Mr. Anderson may have made a tentative draft and not submitted it. He may have kept it among his papers. That would, of course, not be material. Even supposing you could make this evidence, unless the draft has been handed over to the other side it certainly should not be used.

Mr. WYVELL. I am very frank to say that I can not speak definitely as to the exact manner in which these two days' negotiations occurred. I only know that those were draft-treaties passing backward and forward, those three, and I obtained this information from Mr. Anderson.

Mr. MIGNAULT. Of course, we will admit that it would be mere hearsay. We have no information that these drafts were passed on.

Mr. GLENN. Can you show, Mr. Wyvell, as a matter of fact, that this particular draft which I hold in my hand was given to the other side?

Mr. WYVELL. The two other papers which I am to submit later, I think, will definitely establish that fact.

Mr. MIGNAULT. I presume, Mr. Wyvell, that if these drafts are different from Article VI of the treaty, it is assumed that they were not accepted by the other side?

Mr. WYVELL. There were changes made, of course, before it was finally accepted.

Mr. MIGNAULT. That is the trouble with drafts of an agreement, and that is the reason why the agreement alone is evidence of what the parties intended. A draft of an agreement is no evidence.

Mr. WYVELL. I assume that you gentlemen will give them such consideration as you deem proper.

Mr. MIGNAULT. Yes; we will allow them to go in with that understanding.

Mr. WYVELL. There are also two undated drafts of treaties submitted between January 1 and January 9, 1909, reading, respectively, as follows:

MR. GIBBONS'S DRAFT.

ARTICLE VI. It is agreed that for the use for irrigation the St. Mary and Milk Rivers (in the State of Montana and the Province of Alberta) and their tributaries are to be treated as one stream, and the total amount that can be diverted from the two for such purpose is to be distributed so that each country shall have the right to one-half of the whole, but in the distribution more may be taken from one stream and less from the other by each country so as to afford a more beneficial use to each.

It is agreed that there exists on the part of Canada the right to a prior appropriation of 360 second-feet of the flow of St. Mary River during the irrigation season between the 1st of April and the 31st of October, inclusive, annually, and that there exists a similar right on the part of the United States

to a prior appropriation of 360 second-feet of the flow of Milk River during the said irrigation season.

The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of the waters of St. Mary River stored in the United States. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance through the Milk River of the waters from the St. Mary River.

The measurement of the water so to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of Canada under the direction of the International Joint Commission of the United States and Canada.

ORIGINAL DRAFT C. P. A.

ARTICLE VI. It is agreed that each country shall have the exclusive right to one-half of the natural flow of the St. Mary and Milk Rivers and their tributaries, the amount thereof to be determined at the points of storage and diversion and at the boundary by measurements made jointly by the properly constituted reclamation and irrigation officers on either side of the boundary; and the channel of Milk River in Canada may be used at the convenience of the United States for the conveyance, without interference, while passing through Canadian territory, of the waters of either river stored in the United States and constituting any part of its one-half share.

The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance through the Milk River of the waters belonging to the United States.

It is further agreed that there exists on the part of the United States the right to a prior appropriation of 400 feet of the natural flow of the waters of the Milk River during the irrigation season between April 1 and September 30, annually, and that there exists during the same season a right on the part of Canada to a prior appropriation of an equal amount of the natural flow of the waters of the St. Mary River, and during the period above mentioned such prior appropriations shall not be subject to reduction by the other country.

(Mr. Wyvell introduced also three telegrams from George C. Gibbons to Chandler P. Anderson, dated January 9, 1909, and two telegrams from Mr. Anderson to Mr. Gibbons, dated January 9 and January 10, 1909, respectively, all of which are copied into the record in full, as follows:)

Geo. C. Gibbons to Chandler P. Anderson.

OTTAWA, ONTARIO, *January 9, 1909.*

CHANDLER P. ANDERSON,

Mills Building, 35 Wall Street, New York City:

Home authorities suggest the following changes, all of which I think you can concur in to bring treaty within constitution:

Article 1: Instead of "the inhabitants of the United States and Canada" read "the subjects of or citizens of the high contracting parties." Instead of "both countries" say "both of the high contracting parties."

Article 2, last paragraph: Instead of "neither Government" say "neither of the high contracting parties."

Article 3: In name of commission strike out the words "of the United States and Canada."

Article 6: Say "Provinces of Alberta and Saskatchewan"; change name of the commission, leaving out the words "of the United States and Canada"; instead of "other rivers" say "the St. Marys River."

Article 7: After the words "United Kingdom appointed by" put in "His Majesty on the recommendation of the Governor in Council."

Article 8: At the end instead of "the two Governments" say "the high contracting parties," and later instead of "between the two Governments" say "between them."

Article 9, second line: Say "differences arising between them" instead of "between the United States and the Dominion of Canada"; after the words "common frontier" put in "between the United States and the Dominion of Canada."

Article 10, in first line: Instead of "United States and Dominion of Canada" say "between the high contracting parties." They suggest that the article of The Hague Convention is wrongly stated. Should be 45, sections 4 to 6.

Article 11: Instead of "Secretary of State" say "Governor General of the Dominion of Canada."

Article 13: Instead of "The Governments of the United States and the United Kingdom" say "between the high contracting parties"; change "accord" to "arrangement."

Article 14: Instead of "After its date" insert "dating from date of exchange of ratifications."

Expect to have this afternoon full confirmation of whole, and will wire you immediately.

GEO. C. GIBBONS, *Rideau Club*.

Geo. C. Gibbons to Chandler P. Anderson.

OTTAWA, ONTARIO, *January 9, 1909.*

CHANDLER P. ANDERSON,

131 East Sixtieth Street, New York City:

Wired you this morning to office address. Kindly get message, if not received. Sir Wilfrid has sent authority to Mr. Bryce to sign letter re treaty of 1842. Everything now agreed to our people. May want clause providing for submission to Parliament; if so, will advise Mr. Bryce to-morrow. Am wiring Mr. Bryce so that you can go ahead.

GEO. C. GIBBONS.

Geo. C. Gibbons to Chandler P. Anderson.

OTTAWA, ONTARIO, *January 9, 1909.*

CHANDLER P. ANDERSON,

121 East Sixtieth Street, New York:

Our people would like after the words "shall be apportioned equally between the two countries," in article 6, to add "in making such equal apportionment." Kindly have this change made if possible—not imperative. Find it impossible to get letter re treaty of 1842. It would create trouble for cabinet; therefore authorize you to strike out the words "subject to any treaty provisions now existing with respect thereto," in article 2; that will accomplish your purpose fully. Answer Rideau Club, Ottawa. Going home to-night at 10.

GEO. C. GIBBONS.

Chandler P. Anderson to George C. Gibbons.

NEW YORK, *January 9, 1909.*

GEORGE C. GIBBONS,

Rideau Club, Ottawa, Canada:

Three telegrams received. Doubt if alternative proposed for letter about treaty of forty-two will be acceptable. Home office change in article 10 requires additional change, inserting in line 2 after "either" the words "the United States or the Dominion of Canada" and in line 4 substituting "high contracting parties" for "two Governments." Going to Washington Sunday morning to confer on all amendments. Address Metropolitan Club.

C. P. ANDERSON.

George C. Gibbons to Chandler P. Anderson.

BRANTFORD, ONTARIO, *January, 10, 1909.*

CHANDLER P. ANDERSON,

Metropolitan Club, Washington, D. C.

Distinctly understood all right to object Minnesota waived save as protected by article 2. You can rely will never hear of contention again.

GEO. C. GIBBONS.

Chandler P. Anderson to George C. Gibbons.

JANUARY 10, 1909.

GEORGE C. GIBBONS,
London, Ontario, Canada:

Have accepted all amendments and decided to sign without change in article 2, relying upon your assurance that objection to diversion in Minnesota will not be further urged.

CHANDLER P. ANDERSON.

George C. Gibbons to Chandler P. Anderson.

LONDON, ONTARIO, *January 10, 1909.*

CHANDLER P. ANDERSON,
Metropolitan Club, Washington, D. C.:
Many thanks.

GEO. C. GIBBONS.

Mr. WYVELL. That completes the documentary evidence which we have with relation to the signing of the treaty.

STATEMENT OF MR. R. J. BURLEY, IRRIGATION BRANCH, INTERIOR DEPARTMENT, CANADA.

(Mr. R. J. Burley, irrigation engineer, was then examined by Mr. MacInnes.)

Mr. MACINNES. Will you tell us exactly, Mr. Burley, what position you hold in the service of the Dominion Government?

Mr. BURLEY. I am irrigation engineer in the employ of the department of the interior of Canada.

Mr. MACINNES. Would you state how long you have held that position and what has been your connection with the subject matter of this case?

Mr. BURLEY. I have been in the employ of the department of the interior since July, 1902, up to the present time.

Mr. MIGNAULT. Is the Cypress Hills Water Users' Association an incorporated body?

Mr. BURLEY. I think not.

Mr. MIGNAULT. Who composes it?

Mr. BURLEY. It is composed of a body of farmers who subscribe so much per year and have annual meetings in their own interests.

Mr. MIGNAULT. How long has it existed?

Mr. BURLEY. It has recently held its third annual meeting.

Mr. MIGNAULT. Does it issue reports?

Mr. BURLEY. So far, no. It is hoped they will be included in the Western Canada Irrigation Association report; it is a subsidiary body to the Western Canada Irrigation Association.

Mr. MACINNES. Your headquarters are at Calgary?

Mr. BURLEY. Yes.

Mr. MACINNES. You have knowledge of the St. Mary River and the Milk River situation?

Mr. BURLEY. I have. I have been over both streams practically from source to mouth.

Mr. MACINNES. And I understand you have prepared a summary of what you consider to be the geographical situation?

Mr. BURLEY. I have.

Mr. MACINNESS. You are a civil engineer?

Mr. BURLEY. I am.

Mr. MACINNES. You are a member of the Canadian Society of Civil Engineers?

Mr. BURLEY. Yes.

Mr. MACINNES. And a graduate of what university?

Mr. BURLEY. I am a graduate in the faculty of science, Toronto University.

Mr. MACINNES. Will you give the commission the benefit of your study of the important geographical features affecting the drainage basin of the St. Mary River and the Milk River?

Mr. BURLEY. Yes.

DESCRIPTION OF THE ST. MARY AND MILK RIVER DRAINAGE BASINS.

ST. MARY RIVER DRAINAGE BASIN.

The St. Mary River rises in northwestern Montana on the eastern slope of the main range of the Rockies, in a region of perpetual snow and ice. The stream flows out of the Blackfoot glacier (probably the largest in the Rocky Mountains within the United States) and is joined by at least a dozen lesser streams uniting within a short distance of their sources and flowing into the Upper St. Mary Lake. Below this, separated by a narrow strip of land, lies the Lower St. Mary Lake, the total length of the two being about 22 miles.

The river flowing out of the north end of the lower lake is joined about 2 miles down by Swift Current Creek, a stream of about the same size, rising to the north in the Grinnell and other glaciers and flowing out of small mountain lakes. Some 4 miles below this Kennedy Creek flows in from the west and near the international line Boundary Creek flows in from the north.

With the exception of Boundary Creek on the west side and Rolph, Pinepound, and Pothole Creeks on the east side, this river rises in the main range of the Rockies, where the precipitation and run-off are high, and although the drainage area in Montana, tributary to the stream, is comparatively small practically all the water comes from this source and, as a consequence, the stream, while subject to great fluctuation during the summer, has a fairly constant flow during the winter, and during the irrigation season it never dries up, as does Milk River.

Lying in the mountains, the catchment area receives a heavy rain and snow fall, averaging about 60 inches per annum, and the run-off is correspondingly large, averaging $30\frac{1}{2}$ inches per annum at the international boundary during a period of 11 years for which records are available, so that although the drainage area above this point is only 452 square miles, the average annual run-off is over 735,000 acre-feet, forming more than three-fourths of the combined flows of the two river systems at their last crossings of the boundary.

This river has a comparatively rapid fall throughout its course, especially between the St. Mary Lakes and the Alberta Railway &

Irrigation Co.'s intake, the elevation of the water level of the river at various points being as follows:

| Point on river. | Elevation above sea level. | Approximate distance from last point. | Fall. | Fall per mile. |
|--|----------------------------------|--|--------------|-------------------|
| | | <i>Miles.</i> | <i>Feet.</i> | <i>Feet.</i> |
| St. Mary Lakes..... | 4,460 | | | |
| International boundary..... | 4,103 | 13.5 | 357 | 26.4 |
| North boundary township 2, range 24..... | 3,680 | 19.0 | 423 | 22.3 |
| North boundary township 4, range 24..... | 3,435 | 25.0 | 245 | 9.8 |
| East boundary township 6, range 23..... | 2,969 | 34.0 | 466 | 13.7 |
| At confluence with Belly River..... | 2,705 | 32.0 | 264 | 8.3 |

In the upper part of the stream valley the banks are, as a general rule, gently sloping on the west side of the river, while a number of cut banks of clay and sandstone are found on the east side down to the crossing of the United States Reclamation Service siphon west of Spider Lake, where a valley extends eastward into the drainage basin of Rolph or Willow Creek. Below this point almost to the intake of the Alberta Railway & Irrigation Co.'s canal the valley banks are high and in many places precipitous, especially through township 1 in Canada, but from this point to about the center of township 4 the valley is wider and the slope of the banks much more gentle. From here on the stream flows for some distance in a deep, narrow canyon, with almost perpendicular banks of clay with layers of sandstone, and lower down while the valley is wider there are numerous clay and sandstone cut banks which effectually preclude the possibility of diversion for irrigation purposes, and, if reasonable cost is a consideration, there would appear to be no feasible scheme for the diversion of water from this river for use on the bench lands at any point much below the south boundary of the Blood Indian Reserve.

The bed of the stream from the St. Mary Lakes to the canyon in township 4 is comprised of gravel and bowlders, and the banks of sand and gravel almost entirely. This bed formation is characteristic of the stream, although there is more rock and the bowlders are larger in the lower reaches, while the water is more turbid, affected probably by the clay banks along this portion of its course.

In the upper part of the stream where the grade is high there are several channels, in places, separated by gravel banks, but lower down this characteristic is lost and the stream appears to be confined to one channel and within well-defined banks.

Forestation along the stream valley is practically absent north of the mouth of the Swift Current Creek, and while there is a sparse growth of aspen, willow, and poplar above this point, it is not present in sufficient quantity to be commercially valuable.

The principal tributaries of this river are Swift Current Creek, already mentioned, Kennedy Creek, and Lee Creek.

Kennedy Creek, flowing in from the west is similar to the Swift Current in many ways, and although smaller forms quite an important addition to the flow of the river. It rises in the mountains be-

tween the head of the Swift Current and Chief Mountain, and, although the catchment area is small, the run-off per square mile is large.

Lee Creek rises on the north slope of Chief Mountain, crosses the international boundary some distance to the west of the St. Mary, and after flowing some 15 miles through Canadian territory joins the stream east of Cardston. It has a large flow during the spring and early summer, but during the remainder of the year the flow drops off rapidly until, during the winter months, there is scarcely more than enough to supply the domestic needs of the settlers along it and the municipal requirements of the town of Cardston.

The tributaries on the east side of the river, viz, Rolph or Willow Creek, Pinepound Creek, and Pothole Creek, rising as they do in the foothills or on the Milk River Ridge, are unimportant and can not be depended upon to supply even the domestic needs of the residents along them.

Boundary Creek, rising in the foothills between Lee Creek and the river and flowing in on the west side immediately south of the boundary, is similar to those last mentioned, and the same remarks apply to it.

MILK RIVER DRAINAGE BASIN.

Milk River heads from springs scattered through the rolling foothills on the east side of St. Mary Lake and River. This tract of hilly country is shown upon the United States Government maps as "St. Mary Ridge," and forms the divide between waters flowing to Hudson Bay and those flowing to the Gulf of Mexico via the Missouri River.

The catchment area of Milk River is a very large one, covering about 2° of latitude, but for the most part cut off from the mountain areas. On this account it does not receive a constant supply from permanent bodies of snow and ice, and in consequence the volume of the stream is subject to sudden fluctuations, governed largely by precipitation over its widely extended drainage basin.

There are three principal branches. The North Fork flows northeasterly and crosses the international boundary in range 23, west of the fourth meridian, very nearly in longitude 113° west. The Middle and South Forks unite, and under the title of "South Fork," with a northeasterly direction, flow across the international boundary in range 20, 19 miles east of the crossing by the North Fork.

In Canada the North Branch continues its northeasterly direction to a greatest distance of nearly 14 miles due north of the boundary, when it turns sharply south and joins the South Branch near the middle of township 2, range 18. From the junction the stream flows easterly on a course generally parallel to the international boundary, which it finally crosses close to the east boundary of range 5, west of the fourth meridian, 90 miles east of the crossing of the South Branch. At no place is the main stream more than 11 miles north of the international boundary, and the average is about 7.

From its final crossing, in range 5, Milk River flows in general direction 60 miles southeasterly to Havre, in Montana, a point near the junction of the main line and Great Falls branch of the Great Northern Railway. From here on the general direction is easterly,

bearing gradually toward the south. The length from final crossing of the boundary to the junction with the Missouri River is, in general direction, about 245 miles, and the distance of the said confluence due south of the international boundary very nearly 70 miles.

The length of the stream flowing in Canada from the North Branch crossing to the final crossing is, following the sinuosities of the stream, 215 miles, and from the South Branch crossing to the final crossing about 177 miles.

Along the North and South Branches there are no flats of magnitude and the banks are, for the most part, comparatively low but steep and the valleys narrow.

From the junction of the two branches to Pendant d'Oreille, section 21, township 2, range 8, the river valley is, in general, narrow and treeless, with low banks, having comparatively gentle slopes, but below Pendant d'Oreille, as far down as the mouth of Lost River, the banks are very high and steep and the drainage area back of the river is composed principally of "bad lands." The valley itself is narrow, wooded, and deeply cut by freshet channels from the clay and sandstone formation above. The bed of the river along this portion is composed of quicksand and shifts greatly at high stages. It is probable that the increased flow caused by the discharge of the St. Mary diversion canal will cause a great deal of scour both in the bed and banks.

From the mouth of Lost River to Havre the formation of the river banks and valley is similar to the last-mentioned portion with the difference that the "bad lands" are less pronounced and the banks lower and less steep. The valley is somewhat wide, as a general rule, but the land is very poor and the vegetation scant, nothing in the way of forestation being seen.

Below Havre, however, the character of the valley changes completely, the hills become lower, the slopes gentle, and the valley itself ranges from 1 to 4 miles in width, containing some first-class agricultural land, which under irrigation gives very good results in the growth of alfalfa, garden stuff, and cereals. Trees reappear, and from Havre to the mouth of the stream there is a considerable growth of large poplar, willows, etc.

The river bed remains unchanged and is composed of quicksand with occasional gravelly rapids. The fall is small and the current in low water sluggish, while the banks in most places are liable to overflow in flood water.

Between Chinook and Malta the average width of the valley is about 3 miles, and it is, in general, composed of very flat land, ranging from sandy loam to "gumbo," which gives favorable results under irrigation. From Malta around the big bend to a point northeast of Saco the valley narrows again, and while not so narrow as above Havre, resembles that stretch of stream in some respects. Below this the valley widens again and leaves some very fine flats on either side clear to the mouth of the river.

Milk River in Montana is fed by numerous tributaries from both north and south between Havre and the mouth, those on the north rising between the Cypress Hills, Old-Man-on-His-Back Plateau, Boundary Plateau, and Wood Mountain, while those from the south

rise in the Sweet Grass Hills, Bear Paws, and Little Rocky Mountains. In its course through Canada there are a few small and unimportant tributaries rising in the Sweet Grass Hills, but practically all the drainage area from the north discharges into Pakowki Lake.

Of the five tributaries rising in Canada the Frenchman River is the most important both in point of water supply and irrigable area tributary to it. Rising in Cypress Lake, township 6, ranges 26 and 27, west of the third meridian, it flows in a general southeasterly direction, following a very sinuous course, and leaves Canada in range 10 west of the third meridian, joining Milk River at a point 6 miles northeast of Saco and about 33 miles south of the crossing of the international boundary.

The valley in Canada, while generally not of great width, contains a number of fine flats well suited to irrigation, but in Montana it is narrow and the great bulk of the land irrigable from this stream is in the Milk River Valley.

Battle Creek, known in Montana as the North Fork of Milk River, rises in Alberta near the highest part of the Cypress Hills, and is fed by a large number of spring creeks in its course southeast. The upper part of the watershed is well wooded, but south of township 7 the stream runs through a rolling prairie country with no tree growth.

The valley in the upper reaches of the stream is very deep, having small flats adjoining the stream, but after leaving the hills near the south boundary of township 7 it becomes much more shallow and has numerous large flats well adapted to irrigation until it reaches the north boundary of township 2 where it narrows again and gradually deepens until the irrigable areas along the stream become small and scattered.

The general course of this stream is southerly, and it joins Milk River at a point about 6 miles east of Chinook, Mont.

Lodge Creek, known in Montana as the West Fork of Milk River, rises in the eastern portion of the Province of Alberta, in the western end of Cypress Hills. The source of water supply consists principally of run-off from snow and rainfall, and this stream is therefore not nearly so constant in flow as Battle Creek.

The valley after leaving the hills is similar to that of Battle Creek, which it roughly parallels, joining Milk River just to the west of that stream.

Rock Creek rises in a number of branches flowing out of Wood Mountain in central Saskatchewan. The sources of water supply are similar to those feeding Lodge Creek, and while the stream has a considerable drainage area in Canada, it is not at present utilized in this country for irrigation.

Whitewater Creek, while rising in Canada, has such a short course north of the boundary that its waters will probably never be used to any great extent for irrigation. It depends wholly for its water supply upon the natural run-off due to snow and rain.

The catchment area of Milk River, comprising as it does in Canada as well as in the United States over 20,000 square miles, might be expected to present a great variety of topographical features, and, in a sense, this is true, as the range of elevation above sea level is

between 1,900 and 7,000 feet. approximately. The greater part of this whole area, however, might be appropriately described as rolling prairie and foothill country. The outstanding topographical features forming the limits of the basin are the foothills of the Rockies in the Blackfeet Reserve, the Milk River ridge, extending north-eastward from them into Canada, the Cypress Hills and Wood Mountain on the north, and the Sweetgrass hills, the Bear Paw and Little Rocky Mountains on the south. Between these limits can be found almost all varieties of prairie country from level plains to steep, broken, clay cliffs without vegetation, but, as a general rule, the area is extremely rolling and is broken by numerous watercourses which have high discharges during the freshet season but are dry for ten or eleven months a year. Springs, although numerous, are, as a rule, small and have but little effect on the flow of the main drainage channels.

Two remarkable depressions occur in what would otherwise appear to be the catchment area tributary to Milk River, one in townships 3, 4, 5, and 6, ranges 4 to 12, west of the fourth meridian, and the other in the large tract east of Battle Creek (North Fork of Milk River) and south of the Frenchman River. The first depression, forming the drainage area of Pakowki Lake, is at its lowest point some 27 feet lower than the bed of Milk River to the south of it, and in the case of the second the banks of the Frenchman River on the north and east sides and the boundary and Old-Man-On-His-Back Plateaus on the south and west, form a large shallow basin full of small lakes and sloughs which have no outlets to the stream channels around them.

MR. MACINNES. There is a difference between Mr. Conner's figures and yours. Mr. Conner's figures were for a certain period of years.

MR. BURLEY. Yes.

MR. GLENN. What was the amount?

MR. BURLEY. Fifteen thousand acre-feet is the difference in the two amounts.

MR. MACINNES. You give the catchment area as 20,000 square miles. Mr. Conner said 12,000 or 14,000 square miles.

MR. BURLEY. Mr. Conner referred to the catchment area in Montana solely; mine is the total in Canada as well as in Montana.

MR. POWELL. Mr. Burley, the circumstances are such that you are apparently better acquainted with the whole question there than anyone connected with the Canadian side.

MR. BURLEY. I believe I am as fully acquainted with the country and conditions as anyone.

MR. POWELL. In the first place, will you tell us how many gathering grounds there are in the Milk River and St. Mary River systems?

MR. BURLEY. I do not think I understand your question.

MR. POWELL. I see on this map here that you have different catch basins; the map divides the territory into four or five catch basins; the red lines determine the catch basins.

MR. BURLEY. That was done for a certain purpose. Take the whole catchment basin of the St. Mary River and it would be outlined by this drainage area line on the map.

MR. POWELL. The only diversion that could be made of the waters of that system is by means of this proposed canal?

Mr. BURLEY. Two proposed canals, our Canadian canal and the United States Reclamation Service canal.

Mr. POWELL. The only diversion in the United States territory is by means of this proposed canal from the St. Mary system.

Mr. BURLEY. There was no diversion proposed.

Mr. POWELL. That is not in contemplation now.

Mr. BURLEY. That is not in contemplation now, as I understand.

Mr. POWELL. The point I wish to get is that these tributaries that enter the St. Mary River below the proposed present point of diversion by the canal can not by any possibility be brought into United States territory, can they?

Mr. BURLEY. Yes; two of them can. The Swiftcurrent Creek and Kennedy Creek are intercepted by that canal.

Mr. POWELL. But the proposition is to divert the waters of the Swiftcurrent into St. Marys Lake.

Mr. BURLEY. I understand that is the proposition. I really can not say what the Reclamation Service plans are.

Mr. POWELL. Put it this way: All the tributaries of the St. Mary that enter St. Mary River below the confluence of the Swift Current Creek and St. Mary River; there are no others that can be diverted into United States territory?

Mr. BURLEY. The St. Mary River watershed you are speaking of?

Mr. POWELL. Yes.

Mr. BURLEY. Well, if you except Kennedy Creek there are not any.

Mr. POWELL. Then, in any allotment or apportionment we might make, assuming they are waters we have to apportion, all the tributaries of the St. Mary River that enter the St. Mary River below this particular confluence must be allotted to Canada?

Mr. BURLEY. Yes.

Mr. POWELL. The other catch basin is what you call the Milk River system?

Mr. BURLEY. There is a catch basin included in that which is a sink; there is no outlet for it.

Mr. POWELL. You speak of the valley of the Milk River and below a certain portion of sandy territory you say it was good land, and you said that the breadth was from 1 mile to 4 miles?

Mr. BURLEY. Yes.

Mr. POWELL. Are the limits of that valley—I am not speaking about the general catch basin—are the limits of that valley well defined?

Mr. BURLEY. They are very well defined, indeed.

Mr. POWELL. Are they well defined, so far as the elevation of the country is concerned, or how are they defined?

Mr. BURLEY. They are defined by steep valley banks rising up to the bench land. They lie as perfectly level pieces of land, and the valley banks pitch up from these to the bench lands on the river banks.

Mr. POWELL. Then, unless you get a much higher head of water than you would have by nature or by the ordinary dams that are contemplated to be built, the limit of the irrigable land would be to this valley you have spoken of?

Mr. BURLEY. I believe so.

Mr. POWELL. What would be the area of that valley?

Mr. BURLEY. I personally think that the United States Reclamation Service have covered all the irrigable land; that is, irrigable from the economic standpoint.

Mr. POWELL. The reason I ask you is this, that Senator Gardner and myself met Mr. Savage, the engineer who had charge of the works on the ground, and who seems to be a very competent man indeed, and it was thought the absolute limit of irrigable land there was 220,000 acres. That is the impression created on my mind.

Mr. BURLEY. I would not say that the absolute limit is that, but the rest of the land was so divided into small areas and scattered over such a large basin that it is not economically possible to bring it under an irrigation system.

Mr. POWELL. You think it is not an irrigable scheme?

Mr. BURLEY. That is my idea.

Mr. MACINNES. What do you say with regard to the irrigable area in Milk River Valley and the tributaries of the Milk River which start or head in Canada; what do you estimate that to be?

Mr. BURLEY. I think Mr. Conner's figures are reliable. What Mr. Conner gave was in regard to the beneficial use at the present time. The remarks I made with regard to the area being scattered apply more to the tributaries than to the main valley of the Milk River. While there are irrigable lands in these valleys, it is doubtful whether it will ever pay anyone to develop them on account of the smallness of the areas at any one place, much further than they are at present developed:

Mr. MACINNES. What further development would there be of land on what you might call the Canadian tributaries of the Milk River?

Mr. BURLEY. What further area of land?

Mr. MACINNES. Yes.

Mr. BURLEY. To put it at the outside figure, I should say from 10,000 to 15,000 acres would be possible.

Mr. MACINNES. What would the total amount of such irrigable area on these tributaries call for in acre-feet?

Mr. BURLEY. Including both sides of the line?

Mr. MACINNES. On the American side only.

Mr. BURLEY. That would be from 20,000 to 30,000 acre-feet additional to what Mr. Conner gave this afternoon as beneficially used.

Mr. MACINNES. And what did he give?

Mr. BURLEY. I think it was 24,360 acre-feet.

Mr. MACINNES. And you say the total would be what?

Mr. BURLEY. Between 45,000 and 55,000 acre-feet possible extension. That would be the extreme limit for the irrigable area.

Mr. MACINNES. Including what Mr. Conner gave?

Mr. BURLEY. Yes.

(The commission adjourned until 10 o'clock to-morrow morning.)

WEDNESDAY, MAY 26, 1915.

Pursuant to the adjournment the commission met at 10 o'clock a. m., all the members being present and Mr. Tawney presiding.

Mr. TAWNEY. Gentlemen, we will proceed now with the hearing.

STATEMENT OF R. J. BURLEY, OF CALGARY, REPRESENTING THE
CYPRESS HILLS WATER USERS' ASSOCIATION—Continued.

Mr. MACINNES. Mr. Burley, can you give to the commission in convenient form information as to the existing stream-gauging stations in Canada and the United States?

Mr. BURLEY. I have it here for Canada, Mr. MacInnes, and the joint stations, the ones in the United States, are plotted on the map, but they are provisional only; that is, they are subject to correction by the United States authorities.

Mr. MACINNES. Then I understand that you have a map there?

Mr. BURLEY. Yes, sir.

Mr. MACINNES. Let me see it, will you? We will put this in, subject to any correction that you may have.

(The map just above referred to was marked "Exhibit B.")

Mr. MACINNES. This shows the gauging stations in Canada and also the gauging stations in the United States. I see that the different stations are numbered, and down below you have a memorandum of certain dates. What are those dates?

Mr. BURLEY. Those are the dates of establishment and the dates that the records are available to.

Mr. MACINNES. You also have attached to this plan a summary, or schedule, rather, of the principal stream-gauging stations in the Canadian portions.

Mr. BURLEY. Yes; including the joint gauging stations.

Mr. MACINNES. I see also that as to the United States situation the stations are shown on the plan, but there is not a separate schedule attached.

Mr. BURLEY. There is not a separate schedule. They are subject to correction by the United States authorities. I think they are correct, so far as our information allows us to say so.

Mr. MACINNES. Did you have access to the official reports?

Mr. BURLEY. To the official stream measurement reports of the United States Geological Survey.

Mr. MACINNES. From what source did you put them on?

Mr. BURLEY. From that source—from the official stream measurement reports of the United States Geological Survey. This is the drainage map which I promised yesterday to hand in.

Mr. MACINNES. The map marked "Exhibit A," I understand, we take as being approved by both countries. Is that correct, Mr. Newell?

Mr. NEWELL. Yes, sir; that is the one that we have agreed upon.

Mr. MIGNAULT. That map is approved by both countries?

Mr. MACINNES. Speaking for Canada, yes.

Mr. MIGNAULT. But as to the United States?

Mr. NEWELL. Yes; it contains all the information we have.

Mr. MIGNAULT. We can take that map as an official map which is accepted by both sides, then.

Mr. MACINNES. Mr. Burley, it was said by one of the witnesses in behalf of the United States that certain water would be wasted in the lower Milk River Valley. I think Mr. Newell said something about it. What have you to say as to that?

Mr. BURLEY. As far as that wasted water is concerned in the lower Milk River Valley, I think Mr. Conner stated that there were

200,000 or 300,000 acres irrigable. If that is the case, it seems to me that that water will be utilized eventually upon the irrigation of that other land, so that there will not be any waste water going into the lower Milk River Valley.

Mr. WYVELL. Mr. Burley, you are familiar with the actual conditions of irrigation along the St. Mary Canal, are you not—the Canadian canal?

Mr. BURLEY. The Alberta Railway irrigation canal?

Mr. WYVELL. Yes.

Mr. BURLEY. I would hardly say that I am familiar with it. I have been over the system. That is about as far as I would care to go.

Mr. WYVELL. Do you know how much water per acre is used upon the lands for irrigation purposes in the Canadian project?

Mr. BURLEY. We have been carrying on experiments regarding that. In the season of 1913 that came to an average of about 1.3 acre-feet per acre, and in 1914 to about 1.81 acre-feet per acre.

Mr. WYVELL. A little above an acre and a third?

Mr. BURLEY. One is a little above an acre-foot and a third and the other is an acre and three-quarters.

Mr. WYVELL. These lands lie where, principally? Where the water is actually being used?

Mr. BURLEY. They lie near Coaldale, on the Canadian Pacific Railway's Crows Nest branch, in the vicinity of Lethbridge, on the same railroad, and in the vicinity of Magrath and Stirling.

Mr. WYVELL. As I understand it, you take the water to irrigate these lands through one main canal. Is that correct?

Mr. BURLEY. That is correct at the present time.

Mr. WYVELL. That is, there is only one canal which taps the St. Mary River of much importance?

Mr. BURLEY. Yes; that is true.

Mr. WYVELL. Have you figures showing the amount of water taken by that canal in the last few years?

Mr. BURLEY. They are in our stream-measurement reports. The data is published in those reports.

Mr. WYVELL. If my memory serves me rightly, in the last two or three years you have taken during irrigation seasons from 117,000 to 120,000 acre-feet.

Mr. BURLEY. I think your figures are a little out.

Mr. WYVELL. Is there anyone here who can supply those figures later?

Mr. BURLEY. We are turning in the stream measurements report as an exhibit to the commission, and those figures are contained in that report so far as we have them.

Mr. WYVELL. That report has not been put in yet?

Mr. BURLEY. I think not. I do not know whether we have copies of that with us or not.

Mr. WYVELL. Then, assuming you take 120,000 acre-feet in a year, you would not be actually applying to the land over eighty-odd thousand. Is that correct?

Mr. BURLEY. I would prefer not to make a direct statement, as I am not completely familiar with the system. Mr. Peters will probably give you that information.

Mr. WYVELL. Now, the farthest westerly tributary of the St. Mary River which flows from the United States into Canada is a branch of Lee Creek, is it not?

Mr. BURLEY. It is Lee Creek, I think.

Mr. WYVELL. Well, it has two or three prongs?

Mr. BURLEY. Yes; it has several branches.

Mr. WYVELL. That is fed by the water from——

Mr. BURLEY. It rises, as I stated yesterday, in the slope of Chief Mountain.

Mr. WYVELL. Your plan does not show any measurement station in that river, does it?

Mr. BURLEY. Yes; I think it does.

Mr. MACINNES. Yes; it is No. 5 on "Exhibit B."

Mr. WYVELL. It does show No. 5, but at a distance of about how far from the mountain? You can look at the map, Mr. Burley. Perhaps that will assist you.

Mr. BURLEY. It is about 10 miles due north of the boundary.

Mr. WYVELL. Between the point on the boundary and the point at the measurement station, does it receive any water?

Mr. BURLEY. Oh, yes.

Mr. WYVELL. In what proportion does it receive water, compared with the point at the measurement station?

Mr. BURLEY. I could not state that. It runs through a foothill country.

Mr. WYVELL. You can not tell with any reasonable accuracy the amount of water which passes over the boundary from these records?

Mr. BURLEY. No, sir; I can not.

Mr. WYVELL. Is there any irrigation between the boundary and the point where Lee Creek empties into the St. Mary River along Lee Creek?

Mr. BURLEY. Yes; there is one.

Mr. WYVELL. How many acres?

Mr. BURLEY. Seventy acres. There is also a municipal water supply, taking water from Lee Creek, at the town of Cardston.

Mr. WYVELL. Now, with regard to Boundary Creek. The headwaters of Boundary Creek are likewise in the United States, are they not?

Mr. BURLEY. They are.

Mr. WYVELL. You do not maintain any measurement station on Boundary Creek at all?

Mr. BURLEY. We have one; yes.

Mr. WYVELL. I do not see that shown here on the map.

Mr. BURLEY. It is probably not shown. Some of the small and unimportant ones are not shown.

Mr. WYVELL. Are you familiar with the amount of water which Boundary Creek contributes to St. Mary River?

Mr. BURLEY. Yes; in a way, as far as our stream measurements go.

Mr. WYVELL. How much do you think it contributes, with as reasonable accuracy as you can state?

Mr. BURLEY. I am mistaken. I have not the figures for that. They are in the stream measurement reports, however.

Mr. WYVELL. That information can come in later, can it?

Mr. BURLEY. Yes, sir.

Mr. WYVELL. Are you familiar with the headwaters of Boundary Creek? I mean as to the amount of water which it receives from the watershed in Montana.

Mr. BURLEY. I have been over the headwaters of Boundary Creek, but I would not care to commit myself on the amount of water received, as it is a very hard thing to do, and I do not think any engineer can do it with any degree of accuracy.

Mr. WYVELL. Rolph Creek, which flows into the St. Mary River from the east, arises where?

Mr. BURLEY. It arises a mile or so south of the boundary.

Mr. WYVELL. I do not suppose it receives any water of any consequence in the United States, does it?

Mr. BURLEY. Not very much.

Mr. WYVELL. It extends only a mile in the State of Montana?

Mr. BURLEY. I would not say that. It is about a mile directly south of the boundary, but it runs along parallel to the boundary for a little greater distance.

Mr. WYVELL. You refer in your statement of the drainage area in Montana as being comparatively small. You mean, of course, from the drainage area in Montana as compared to the total flow?

Mr. BURLEY. Yes.

Mr. WYVELL. You spoke yesterday of the length of St. Mary River in the United States and gave it as something like 200 miles. You mean, of course, by following the stream?

Mr. BURLEY. I do not think I gave that statement.

Mr. WYVELL. Excuse me, I meant the Milk River in Canada.

Mr. BURLEY. Two hundred and fifteen miles.

Mr. WYVELL. That is following all the bends of the river?

Mr. BURLEY. That is correct.

Mr. WYVELL. Suppose you take Milk River and follow all the bends from the eastern crossing to Nashua. Do you know how many miles you would get there?

Mr. BURLEY. You will have to ask some of the gentlemen from the United States.

Mr. WYVELL. You would get over a thousand, would you not?

Mr. BURLEY. I would not commit myself at all.

Mr. WYVELL. Measuring in a straight line from the point at the western crossing of Milk River you would have about 110 miles.

Mr. BURLEY. About 110 miles; that is from the crossing of the North Branch to where it leaves Canada along the boundary line.

Mr. WYVELL. Some of my associates desire to ask Mr. Burley some questions about conditions lower down the Milk River.

Mr. MACINNES. Perhaps before they do so, there is a question I would like to ask Mr. Burley. Mr. Burley, you referred to stream measurement reports. I have here the official reports entitled "Reports of progress of stream measurements for the calendar year 1909, 1910, 1911, 1912, and 1913." Will you tell me whether those are the ones you were referring to?

Mr. BURLEY. Those are the reports that I referred to.

(The reports just referred to were marked "Exhibits C, D, E, F, and G.")

Mr. MACINNES. Do they comprise all the official reports on the Canadian side?

Mr. BURLEY. They comprise all the official reports on stream measurements so far as published.

Mr. WYVELL. Mr. Burley, are you sufficiently familiar with the subject to state as to whether the amount of water taken through your main canal from the St. Mary River was larger in 1914 than it was, say, in 1909, or smaller?

Mr. BURLEY. Speaking offhand, I think it is larger.

Mr. WYVELL. How does it compare with 1908; that is, 1914 with 1908?

Mr. BURLEY. Information for the year 1908, I am afraid I can not give you. Our records do not extend back as far as that.

Mr. WYVELL. Take the year 1913 and compare it with the year 1910.

Mr. BURLEY. The A. R. & I. Canal discharge for 1913 was 118,468 and for 1910 it was 146,999.

Mr. WYVELL. And for 1911 I have the figures here as 117,950, which were taken from your reports. If there is any correction, you can look it up. To make the record complete, you may state the figures for 1912.

Mr. BURLEY. 103,295.

Mr. WYVELL. The records for 1914 have not been published, have they?

Mr. BURLEY. They have not been published. I think they are completed.

Mr. MACINNES. Mr. Burley, you said that those reports were all that had been published. Are there any other reports not published which would be of assistance to the commission?

Mr. BURLEY. Yes. The 1914 information is not published, and I could not say that it is in its final form, although I think it is.

Mr. MACINNES. That will be available for the commission.

Mr. BURLEY. That will be available for the commission. If they wish, we can turn it in to them as an exhibit.

Mr. MACINNES. Then Mr. Newell was good enough to say yesterday that the reports of the Reclamation Service would be available. Mr. Burley, I understand that you read through the reports of the Reclamation Service?

Mr. BURLEY. Yes; I have.

Mr. MACINNES. I would like any references that you can give us in them to the irrigable area of land to be dealt with by the Reclamation Service. Have you got that in a form where it can be put in conveniently for the commission?

Mr. BURLEY. Yes; I can read it as extracts from the report.

Mr. SANDS. We do not object to them reading those extracts into the record, if the commission understands that they refer only to the Reclamation Service ditches and not to all the ditches in the valley. That is my understanding of it. Just so the commission is not confused in the matter is all.

Mr. TAWNEY. Those contain information only in so far as the Reclamation Service ditches are constructed under the reclamation act of the Federal Government of the United States?

Mr. MACINNES. The reports will speak for themselves, of course. They simply go in showing what they have dealt with.

Mr. SANDS. That is true if the commission so understands it.

Mr. TAWNEY. We understand that the Reclamation Service does not represent completely the entire reclamation works in the State of Montana. There are some independent reclamation works.

Mr. MIGNAULT. Can we not have a statement giving a complete description, say, of the whole works?

Mr. BIEN. That could be prepared later. We would have to consult the figures of the United States census.

Mr. TAWNEY. With the understanding that that will be supplemented by additional information, I can see no objection to having this information furnished at this time.

Mr. MACINNES. Will you now give us those extracts, Mr. Burley?

Mr. GLENN. If these books are all to be put in, what is the necessity of having the extracts from them?

Mr. MACINNES. So as to relieve the commission from having to read all the volume.

Mr. GLENN. You just want to refer to certain pages?

Mr. MACINNES. To furnish the pages and indicate very briefly to the commission what is in them, so it will save you time and labor.

Mr. MIGNAULT. Following that idea, Mr. MacInnes, perhaps the witness might refer to the page and to the volume.

Mr. MACINNES. Quite so. If Mr. Burley will kindly do that.

Mr. BURLEY. On page 214 of the First Annual Report of the Reclamation Service of the United States there is the following paragraph—

Mr. MIGNAULT. Let me understand this. Are these volumes going in as exhibits?

Mr. TAWNEY. No. I did not so understand Mr. MacInnes.

Mr. MACINNES. That would be really a matter for the commission to decide. It is not intended to put in a lot of material which would have to be reprinted as a part of your report, but at the same time it would seem to be desirable to have copies in the archives, so to speak, of the commission. I understand from Mr. Newell that it is quite easy to get these copies now. At some time later it might be more difficult. My suggestion is that they should go in in the way of a reference, but not be printed.

Mr. BIEN. The volumes are available in Washington, a full set, and I believe it is possible to furnish the commission a full set, although one or two of the earlier volumes may be difficult to get.

Mr. TAWNEY. Let this be the understanding or arrangement, that the Reclamation Service furnish the commission, if possible, with a complete set; that if it is impossible to furnish a complete set that as many volumes as can be obtained be furnished, and that the witness now refer to the pages and volumes of the different reports that are deemed material to the subject matter of the hearing.

Mr. MACINNES. That is it, exactly.

Mr. GLENN. If we have to deal with this thing in the future ought we not to have a complete set in Washington and also a complete set in Ottawa?

Mr. TAWNEY. Certainly; one complete set at Washington and one complete set at Ottawa.

Mr. BIEN. We can get them. For those volumes that we can not furnish we can make copies of the relevant matter.

Mr. BURLEY. On page 214 of the First Annual Report of the Reclamation Service of the United States, 1902, the following paragraph is found:

The Milk River is bounded by high cliffs on either side, 200 feet more or less in elevation, from where it crosses the international line and enters the United States for the last time down to Yantic, 10 miles east of Havre. At the latter point the valley broadens, and the relative heights of the bluffs decrease, and there is to be found here opportunity for diversion to the agricultural lands of the lower Milk River Valley. A map of this vicinity is being made, and a study of this will show the extent of land that can be reclaimed, and the general locations, grades, and sizes of the diversion canals.

Mr. TAWNEY. Is the map in that volume? Mr. Bien can probably state whether it is or not.

Mr. BIEN. No; it is not. It is in separate plates. There is a separate book that goes with this report.

Mr. BURLEY. On page 344 of the Second Annual Report of the Reclamation Service, 1902-3, of the United States, the following is found:

Surveys in lower Milk River Valley.—The greatest amount of field work during 1903 has been done in the section that it is proposed to reclaim. Two divisions are here noted also, based on two separate diversion schemes from Milk River. This stream, after crossing the international line into the United States for the last time, continues in a deep valley for 60 miles or more to a point a short distance below Havre. Here the relative heights of the hills decrease, and the valley broadens.

Ten miles below Havre, or near Yantic, a survey for a diversion canal was made on the north side of the river. A line was first run on a grade of one-half foot to the mile to see if the benches lower down the river could be reached. This was found to be impossible owing to the slight fall of the river. The location is along sidehill most of the way and construction would be expensive. From this survey it was found that only the bottom lands of the valley could be served and another lower line was therefore run and contoured on a scale of 500 feet to the inch. From this survey estimates of the cost of construction can be made.

That is all I wish to introduce, excepting one thing. On page 135 of the Tenth Annual Report of the Reclamation Service of the United States, 1910-1911, is found this reference:

Irrigable area in project, 207,600 acres.

That irrigable area has varied from year to year through the reports, but for the last few years it has been constant for 219,557 acres.

Mr. MACINNES. With reference to Exhibit B, Mr. Burley, the plan of gauging stations, where is the point of intake of the A. R. & I. Canal on the St. Mary River?

Mr. BURLEY. It is on the St. Mary River near Kimball. I can give you the exact section, if you wish?

Mr. MACINNES. Is it near this gauging station No. 4?

Mr. BURLEY. It is about between three-quarters of a mile and a mile below it.

Mr. MACINNES. In the evidence reference has also been made to an A. R. & I. intake on the Milk River. I just want to make it clear in the record. There are two intakes of the A. R. & I. system?

Mr. BURLEY. One is on Milk River and one is on St. Mary River. There is only one on the St. Mary River.

Mr. POWELL. Do these intakes apply to the same canal or to different canals?

Mr. BURLEY. They are separate canals, but they can be extended and joined up.

Mr. MACINNES. I see marked here on Exhibit B Hinsdale, where there is a station numbered 15, and Vandalia. Mr. Newell informed us yesterday that the lowest point of diversion by the United States Reclamation Service on Milk River was at Vandalia. Do you know the distance between Vandalia and Hinsdale?

Mr. BURLEY. I should say it is between 6 and 8 miles.

Mr. MACINNES. In any event, I see that Vandalia is lower down the river than Hinsdale.

Mr. BURLEY. Yes.

Mr. MACINNES. Can you tell the commission, Mr. Burley, what would be the comparison in the yearly flow of water on the St. Mary River below the point of the intake on the A. R. & I. Canal, which I understand to be the only point of intake, up to the mouth and between the waters of the Milk River below Hinsdale or Vandalia, up to the mouth of that river?

Mr. BURLEY. The total flow?

Mr. MACINNES. Yes; the total flow of the one river below that point up to its mouth and the total flow of the other river below that point up to its mouth.

Mr. BURLEY. They are approximately equal.

Mr. WYVELL. Now, Mr. Burley, speaking of the application of water to the land through this Alberta Canal; of course, 80,000 acres do not receive water in any given year, do they, from this canal?

Mr. BURLEY. You are now referring to the irrigation project?

Mr. WYVELL. The irrigation project which is fed by the one canal in the St. Mary River. During the years 1910 and 1913, of which we have records, in no one year was water applied to 80,000 acres, was it?

Mr. BURLEY. You have reference to the irrigation factor upon the tract?

Mr. WYVELL. Yes.

Mr. BURLEY. No; I should say not.

Mr. WYVELL. As a matter of fact, water was not applied to over 30,000 acres; is that true?

Mr. BURLEY. That is not true.

Mr. WYVELL. At what would you put the maximum amount for any one year?

Mr. BURLEY. The average amount would probably be in the neighborhood of 50,000 acres.

Mr. WYVELL. The average amount, you think, would be 50,000 acres?

Mr. BURLEY. Approximately; that is, the land on which water is actually put during any one year. That is not the irrigable area.

Mr. WYVELL. I am speaking of the actual application of the water from the canal to the land. You say the average amount is 50,000 acres?

Mr. BURLEY. Yes.

Mr. WYVELL. About how much of that 50,000 acres is crops and how much is pasture?

Mr. BURLEY. I could not tell you.

Mr. MIGNAULT. Are we to take all the dots as measurement stations on Exhibit B?

Mr. MACINNES. Yes, sir.

Mr. MIGNAULT. The Canadian ones are red and the United States ones green?

Mr. MACINNES. Yes, sir.

Mr. MIGNAULT. Well, some are numbered and some are not.

Mr. BURLEY. The reason is that some are merely check stations. We check our results at the larger stations, and they are not taken into consideration in this matter.

Mr. MIGNAULT. Are we to understand that the numbered stations are the ones for which you have records?

Mr. BURLEY. Yes. We have records for the others, but we do not consider them good enough to be very useful to the commission.

Mr. BIEN. Mr. Burley, I understood you to say yesterday that only two comparatively small areas could be irrigated from the main Milk River above the present plants of the Reclamation Service.

Mr. BURLEY. Possibly I should make an explanation there. I understand that the Fort Belknap is to be included in the reclamation system. If I am mistaken, I withdraw my other statement.

Mr. BIEN. It is very probable. I may say that the Fort Belknap is one of the canals for which we have a contract.

Mr. MACINNES. When you speak of Fort Belknap, that is not the Fort Belknap Indian Canal?

Mr. BIEN. No; it is one of the old canals.

Mr. MACINNES. The Indian one is sometimes spoken of as Fort Belknap, is it not?

Mr. BIEN. Yes. I understand that the Fort Belknap Canal of which we speak is independent of the canal on the Indian reservation begun in 1890. Then, in addition to that, what is your idea, Mr. Burley, of the possibility of taking water from Milk River at a higher elevation and bringing it up to some of the bench lands?

Mr. BURLEY. At what point?

Mr. BIEN. Well, from any point that you may know of or may have seen.

Mr. BURLEY. It is a possibility; but I do not think that it is an economic possibility to take it out above Havre on those large flats that lie to the north of Havre.

Mr. BIEN. That is, at this time?

Mr. BURLEY. Well, at this time, and, if I may use my imagination, for a good many years.

Mr. BIEN. Do you know the difference that has been developed in the last 10 years, we will say, as to the value of crops and the value of lands in northern Montana?

Mr. BURLEY. I can not speak with any authority regarding northern Montana; no.

Mr. BIEN. If, for example, in the next 20 years the value of crops and the value of land are doubled, as they have in the last five or eight years, would you think it would be possible to build a canal here up on the main river?

Mr. BURLEY. I do not think so; not for bench land.

Mr. BIEN. What do you think of pumping?

Mr. BURLEY. I do not consider that pumping is a very feasible proposition for some years to come. In our country we do not consider it so, and I think Montana is comparable, so far as the value of land and water rights is concerned.

Mr. BIEN. What do you think of the future development, say, in 15 or 20 years?

Mr. BURLEY. There is a possibility, but it is a very expensive proposition and would require land values up to probably \$100 or \$150 an acre.

Mr. BIEN. What is your idea of increasing the area by extending the existing canals, both of private ownership and of the Government?

Mr. BURLEY. Extending the existing canals or the plans for canals?

Mr. TAWNEY. In Canada or Montana?

Mr. BIEN. I am speaking now entirely of the Milk River in Montana.

Mr. MIGNAULT. Below the eastern crossing?

Mr. BIEN. Yes, sir.

Mr. BURLEY. There is a slight increase possible, if they care to go to the expense of extending large canals along the river valley over a long distance for comparatively small areas of land which are scattered.

Mr. BIEN. What do you mean by "small scattered areas"?

Mr. BURLEY. I mean that there will be an area of say 100 or 150 acres and then the river will cut back and leave that area separated by a piece of unirrigable land.

Mr. BIEN. Did you ever follow the route of those canals?

Mr. BURLEY. As well as I could, I did; but I have not followed the location stakes.

Mr. BIEN. You think it is only in small tracts of one or two hundred acres that could be reached?

Mr. BURLEY. I think that is true; yes.

Mr. BIEN. Have you studied the topographic map toward the ends of these canals that are planned?

Mr. BURLEY. I have seen them. I have not studied them to a great extent; no.

Mr. BIEN. I wondered what basis you had for differing from the result of our investigations.

Mr. BURLEY. I do not think I did differ materially. I said that the irrigable land was contained in the valley. I think your reports bear me out in that.

Mr. BIEN. What do you say about the possibility of putting in a diversion dam below Vandalia on the Milk River?

Mr. BURLEY. What would be the object of it?

Mr. BIEN. To take in more land.

Mr. BURLEY. I should have thought the present canals of the north and south sides would cover all the land that could be irrigated there.

Mr. BIEN. It is your idea that the Vandalia canals could be extended down as far as the Missouri River?

Mr. BURLEY. I understand that that is the plan. It is shown on the plan that I have, at least.

Mr. BIEN. Do you know the capacity of the canal toward the end for the last 5 or 10 miles?

Mr. BURLEY. I do not.

Mr. BIEN. I may state for the record that those canals come down to a very small capacity near the end, for the reason that at the

present time we regard the extension to full capacity as too expensive for present conditions. I was trying to bring out what might be the future possibilities when land crops become more valuable. There is another question I want to get at and that is about the irrigable lands on the tributaries of the main Milk in Montana, both north and south of the main river.

Mr. MACINNES. Tributaries of the main Milk? Those are not Canadian tributaries.

Mr. BIEN. What would you say, Mr. Burley, as to the possibility of increasing the area by allowing the use of all the water occurring in the tributaries in Montana on lands along the tributaries?

Mr. BURLEY. I think it is very possible.

Mr. BIEN. Have you any idea as to what increase that would make in irrigable area?

Mr. BURLEY. That is a very large area, 14,000 square miles.

Mr. BIEN. Of course, we know that all of that is not irrigable. But the question is pointed to this fact, that the Reclamation Service might do on the Milk River what it has done in other places, that is, exchange water. We could give the lands in the lower valley, the river valley proper, water from St. Mary, for instance, and allow the people on the tributaries to take the water which really belonged down below in the main valley. I wondered if you had given any consideration to that point.

Mr. BURLEY. I have not.

Mr. BIEN. Have you any idea as to how much that might increase the irrigable headwaters?

Mr. BURLEY. You mean as to the ultimate increase?

Mr. BIEN. Yes.

Mr. BURLEY. No; I have not any idea.

Mr. BIEN. Have you any idea as to the flow of those tributaries that I speak of in Montana—that is, north and south of the river above?

Mr. BURLEY. I have an idea how the flow comes, but as to the quantity of it I believe there is no information available.

Mr. BIEN. You spoke of a large amount of waste water at the mouth of Milk River in Montana.

Mr. BURLEY. Mr. Newell spoke of that or Mr. Connor did.

Mr. BIEN. Have you ever considered at what periods of the year that flow occurs?

Mr. BURLEY. I have.

Mr. BIEN. Have you any idea of what the waste water flow in April has been in some years or in any year?

Mr. BURLEY. Yes; at the Hinsdale station.

Mr. BIEN. Do you know what the amount of water flowing at Hinsdale in 1912, in April, was?

Mr. BURLEY. An average of 12,900 second-feet, according to the United States Geological Survey reports.

Mr. BIEN. What would that be in acre-feet?

Mr. BURLEY. Seven hundred and thirty thousand.

Mr. BIEN. Let us suppose, for instance, that 200,000 acres were actually in irrigation. What amount of water would you say would be used in that month?

Mr. BURLEY. I would not attempt to utilize it in that way. Probably they would not use any water during that month on the land, but it could be reservoired and held in that way.

Mr. BIEN. That was the point that I wanted to bring out, that if that were stored it would add further to the irrigable area.

Mr. BURLEY. Exactly if the area was there to irrigate.

Mr. BIEN. Of course, if we were willing to invest large sums of money per acre, do you think there would be any limit to the amount of land that could be irrigated?

Mr. BURLEY. If you put no limit on our expenditures there is no limit to irrigation.

Mr. BIEN. As Mr. Newell has stated, we have doubled in the last few years the limit of area that we could afford to cover, because of the increase in prices. Now, do you understand that any of the annual reports of the Reclamation Service show the irrigable areas outside of the reclamation projects?

Mr. BURLEY. Only in so far as reference is made to certain defined systems.

Mr. BIEN. Have you any idea what the private irrigation area is in Milk River in Montana?

Mr. BURLEY. I have an idea from a statement that was made in the United States Geological water-supply papers for 1906 on the Missouri River drainage basin. It was not thought that there were over 50,000 acres at the outside that could be depended upon to any extent.

Mr. BIEN. Do you understand that that is included in the 220,000 of the project?

Mr. BURLEY. I should say that it was exclusive of that.

Mr. BIEN. Do you know how much of that is in Milk River Valley itself, the old canal?

Mr. BURLEY. I estimate that about 30,000 acres, in round numbers.

Mr. BIEN. I believe that is correct. You spoke of the intake of the A. R. & I. Co. on Milk River in Canada. Has any water been diverted there from the Milk River?

Mr. BURLEY. Speaking from personal knowledge, I can not say, but I believe that water was diverted there in 1904.

Mr. BIEN. Has any been diverted since?

Mr. BURLEY. I could not make a definite statement.

Mr. BIEN. Have you ever examined the intake?

Mr. BURLEY. Yes.

Mr. BIEN. What is its present condition?

Mr. BURLEY. It is not in good condition.

Mr. BIEN. Could it divert any water now?

Mr. BURLEY. No.

Mr. BIEN. Do you know whether it was in operation for more than one year?

Mr. BURLEY. I could not state that.

Mr. SANDS. Regarding the Canadian canal from Milk River, was that canal ever finished so it would take water out upon the land?

Mr. BURLEY. It was.

Mr. SANDS. In 1904, do you think?

Mr. BURLEY. What do you mean by taking water out on the land?

Mr. SANDS. So as to distribute water out on the land.

Mr. BURLEY. I think not. I believe there were some reasons for not doing so.

Mr. SANDS. The water you speak of as having run in the ditch ran for only a mile or two?

Mr. BURLEY. I believe it ran the length of the ditch, for test purposes.

Mr. SANDS. But the ditch was not continued to the point where it would go over the ridge?

Mr. BURLEY. Yes; I understand it carried over the ridge so that it could be used in the reservoirs. I am not making this as a sworn statement. It is merely my understanding, and it is subject to correction.

Mr. SANDS. What is the size of that canal, if you know, Mr. Burley? What is its capacity?

Mr. BURLEY. I believe the capacity was 330 second-feet.

Mr. SANDS. Have you examined it with reference to whether it would be practicable to carry water into the canal or not?

Mr. BURLEY. At the present time, do you mean?

Mr. SANDS. Well, at any time. In order words, was the formation such as would warrant you as an engineer in saying that that would carry water?

Mr. BURLEY. It will not carry water now, but it could be prepared to carry water at a small expense.

Mr. SANDS. You think it would be practicable to carry water in there?

Mr. BURLEY. I think so; yes.

Mr. SANDS. In your statement that you made yesterday you said that three-fourths of the entire flow of the two streams, that is Milk River and St. Mary River, arose in the St. Mary Basin in Montana. Is that true?

Mr. BURLEY. That is approximately correct, in round figures.

Mr. SANDS. Then, one-fourth of the water of the Milk River would arise in the basin of the Milk River Valley, would it not?

Mr. BURLEY. I beg your pardon.

Mr. SANDS. Three-fourths arise in the basin of the St. Mary River in Montana?

Mr. BURLEY. Yes.

Mr. SANDS. And one-fourth arise in the basin of the Milk River Valley, which is in both countries. Is that true?

Mr. BURLEY. Yes; that is true.

Mr. SANDS. What proportion of that one-fourth arise in the United States?

Mr. BURLEY. Subject to correction, I should say 80 per cent.

Mr. SANDS. Then, practically all of the St. Mary water arise in the United States?

Mr. BURLEY. Yes.

Mr. SANDS. And 80 per cent of the Milk River that flows across the international boundary arise in the United States?

Mr. BURLEY. Yes; that is correct; at the eastern crossing.

Mr. SANDS. Then, it is true, is it not, that the United States furnishes nearly all of the water for these two streams?

Mr. BURLEY. At those points; yes.

Mr. SANDS. Then, there is also a drainage basin flowing into the Milk River which flows across the international boundary, known as Lodge Creek, Battle Creek, and Frenchman River?

Mr. BURLEY. There is.

Mr. SANDS. What quantity of water do they furnish; that is, in proportion to the total flow of Milk River?

Mr. BURLEY. They are considerably in excess of the total flow of Milk River at eastern crossing.

Mr. SANDS. Then, you would say that the waters of Milk River flowing across the international boundary—all of them—would be slightly greater from Canada than from the United States; is that true?

Mr. BURLEY. Of the Milk River watersheds?

Mr. SANDS. Yes.

Mr. BURLEY. Yes, sir.

Mr. SANDS. Would it be safe to say that 40 per cent of the waters that flow across the international boundary line into the Milk River arise in the United States? You said 80 per cent of the upper basin.

Mr. BURLEY. About 35 per cent would be the correct figure for the water arising in the United States.

Mr. SANDS. Then, 35 per cent of the flow of Milk River crossing the international boundary rises in the United States and the other 65 per cent rises in Canada. I am speaking now only of the international waters, these that cross the boundary.

Mr. BURLEY. And you are including the tributaries?

Mr. SANDS. Yes. Is that your estimate?

Mr. BURLEY. That is my estimate.

Mr. SANDS. Then, if three-fourths of the water from the St. Mary River and 35 per cent of the waters of the Milk River rise in the United States, approximately, what would be the proportion of the water furnished by the United States for the two systems flowing across the international boundary? It would be about seven-eighths, nearly, would it not?

Mr. BURLEY. I think it would be practically less than that. I think about 80 per cent, but I am not sure.

Mr. SANDS. The United States furnishes about 80 per cent.

Mr. BURLEY. I can work it out in a moment. Approximately it is between 75 and 80 per cent.

Mr. BIEN. Have you any definite figures on which you make that estimate of 35 per cent?

Mr. BURLEY. I have not. It is really deduction from the "Streams measurement report."

Mr. BIEN. And you never computed it except in that way?

Mr. BURLEY. No.

Mr. BIEN. I would like if you would compute it now and find if 35 per cent is as near as the present record would go.

Mr. BURLEY. It works to a little over 64 per cent in Canada.

Mr. BIEN. How much of that is the estimate as to the possible flow and not based on measurements?

Mr. BURLEY. It is all based on measurements, but it is practically all estimated as to the mean annual flow. It is based on the results we have, but our results are incomplete, as you know.

Mr. BIEN. Your present estimate is that 36 per cent rises in the United States from the figures you have at present?

Mr. BURLEY. Yes.

Mr. BIEN. That is, the tributaries coming from Canada or rising in the United States and going into Canada; I mean the waters that would cross the boundary or do cross the boundary.

Mr. BURLEY. Yes; and taking the Milk River at its eastern crossing and the crossing of the five eastern tributaries.

Mr. SANDS. Then what you computed was that the percentage of water that rises in the United States in the two systems flowing across the international boundary—

Mr. CONNER. It would save time to say that to the estimate of 80 per cent checked with the United States figures to within 1 per cent.

Mr. SANDS. Then I may understand you that of the waters in controversy 80 per cent are furnished by the United States and 20 per cent by Canada?

Mr. BURLEY. According to our best estimate, yes.

Mr. MACINNES. The phrase has been used "furnished by the United States," or "furnished by Canada." Has that any reference to any storage proposition in either country or has that reference to water rising naturally?

Mr. SANDS. Rising in the United States.

Mr. MACINNES. Or in Canada. It may be clear to us here, but for the purposes of the record it would be well to state whether "furnishes" includes any storage proposition.

Mr. SANDS. We are speaking of the total flow.

Mr. MACINNES. The waters rising under natural conditions in either country?

Mr. SANDS. Yes. Going to the duty of water, Mr. Burley, what would you say with reference to the loss from seepage and evaporation through a stream 250 miles long; would it be greater or less than the loss on a shorter stream?

Mr. BURLEY. I should certainly say it would be greater.

Mr. SANDS. Yes; but it would make a difference whether the stream bed was of a sandy or rocky character?

Mr. BURLEY. By "rocky" what do you mean; do you mean a gravel or clay bed with rocks?

Mr. SANDS. I will put it in a concrete form. What would you say with respect to the relative loss from seepage and evaporation in the St. Mary as compared with the Milk River? Would it be much greater in the Milk River than in the St. Mary?

Mr. BURLEY. That would be my opinion; yes.

Mr. SANDS. The St. Mary is a swift stream?

Mr. BURLEY. Very swift.

Mr. SANDS. And the Milk River is a very sluggish stream?

Mr. BURLEY. Yes.

Mr. SANDS. And that would be a strong element in determining the question of seepage and evaporation?

Mr. BURLEY. I think not.

Mr. SANDS. You think the question of the velocity of the stream would not have anything to do with seepage and evaporation?

Mr. BURLEY. I think it depends on your wetted perimeter.

Mr. SANDS. On that theory the stream with a great fall would have a less loss, would it not, than one which had a very sluggish flow?

Mr. BURLEY. Yes; but not for the reason you give. The reason it would have a greater loss would be because it would be a larger cross-sectional area and would wet more ground in the case of a sluggish stream for the same amount of water, and therefore it would have a greater loss, but not for any reason so far as the velocity of the stream is concerned.

Mr. SANDS. Would you be able to state in percentage what would be the approximate loss from seepage and evaporation on 400 or 800 cubic feet per second turned into the Milk River at a point where we contemplate turning water into the Milk River to the point where it is to be used below at Chinook and Malta and Vandalia?

Mr. BURLEY. I would not make any statement regarding that, but we have considered it and we have arrived at no definite results.

Mr. SANDS. Would you approximate it at nearly 25 per cent?

Mr. BURLEY. I have done so.

Mr. SANDS. Speaking of the development of the irrigation system in Canada on Lodge Creek, are there any irrigation systems in that creek?

Mr. BURLEY. There are.

Mr. SANDS. How many in Canada?

Mr. BURLEY. Mr. Peters will give them in detail.

Mr. SANDS. You have been over that country?

Mr. BURLEY. I have been over it all.

Mr. SANDS. Would you not think it to the best interests of both countries that the waters of Battle Creek, for instance, where there is a large usage on the part of Canada, be used entirely or almost entirely by the Canadians, we will say, and the waters of Lodge Creek be used by the people of the United States who have developments on that stream; would you not think that would be a feasible way to handle the matter, rather than to divide the water equally?

Mr. BURLEY. No; I do not think it would be a fair proposition from our standpoint.

Mr. MIGNAULT. May I ask what is the object of this question? I am somewhat in the dark about it. We are dealing with Article VI of the treaty. Perhaps you can tell me what contention you are to base on this line of questioning?

Mr. SANDS. The purpose of my question was to suggest that in a division of the waters of each stream it would not be necessary to divide them equally at any place, and I was suggesting that perhaps it might be possible to deliver nearly all the waters of the Battle Creek to the Canadians and all or nearly all the waters of Lodge Creek to the Americans, and that it would be to the beneficial interests of both parties to do that.

Mr. MIGNAULT. I wanted to see the object of the questions; thank you.

Mr. SANDS. The treaty provides that one party may use more of one stream than the other.

Mr. MIGNAULT. I know.

Mr. SANDS. I was trying to get that before the commission.

Mr. WYVELL. I would suggest that Mr. Burley should give as much detail as he can as to the irrigation systems on each one of these creeks and then draw his conclusions.

Mr. MACINNES. Mr. Peters will give full evidence on that point; he is much more familiar with it.

Mr. TAWNEY. We should avoid as far as possible the duplication of testimony.

Mr. SANDS. The reason I wanted to get the evidence from this gentleman was that I thought he had a broader knowledge than Mr. Peters.

Mr. WYVELL. I would suggest that Mr. Sands should get all the information he can from this witness.

Mr. TAWNEY. We are not restricting Mr. Sands in any way.

Mr. WYVELL. This gentleman has a very general knowledge of the conditions.

Mr. MACINNES. I have no objection to the testimony of Mr. Burley continuing to the extent that may seem to help the commission, but he will be followed by another witness who has fuller knowledge on this point.

Mr. SANDS. I have in my mind a scheme for the division of this water which I think would be very practicable. It is not a complete scheme, but a partial scheme, and it is a scheme which might be worked out for the division of the water to the best advantage of all parties concerned. If Mr. Peters is better informed as to the general conditions I will leave it to Mr. Peters.

Mr. MACINNES. Take it up with Mr. Burley to any extent you wish.

Mr. TAWNEY. Proceed, Mr. Sands.

Mr. SANDS. You have been over the irrigation systems in Canada on Lodge Creek and you know something about how many ditches there are?

Mr. BURLEY. Yes.

Mr. SANDS. About how much water is diverted in Canada from Lodge Creek?

Mr. BURLEY. There are approximately 7,000 acres under the existing system in course of construction.

Mr. SANDS. Do you know how much is appropriated from Lodge Creek to the United States?

Mr. BURLEY. I have some idea.

Mr. SANDS. Give it to us.

Mr. BURLEY. West Fork Canal is in fairly good condition and I believe that irrigates 800 acres. But I do not believe they have ever done so recently. The reservoir is in bad repair. The North Chinook Irrigation Association has a large scheme under construction with a reservoir and I believe they contemplate the irrigation of something in the neighborhood of 10,000 acres; that is subject to correction, I am merely stating what I have read.

Mr. SANDS. When were you over that system?

Mr. BURLEY. In 1913.

Mr. SANDS. It was not completed then?

Mr. BURLEY. No.

Mr. SANDS. They had the old reservoir?

Mr. BURLEY. They have a reservoir which, in my opinion, will not be of very much use. It is shallow and covers a large area; the evaporation and seepage would about balance all the water they get.

Mr. SANDS. You have not seen it in working order?

Mr. BURLEY. No.

Mr. SANDS. Coming to Battle Creek, how many appropriators are there in Canada from that creek?

Mr. BURLEY. In Battle Creek 9,359 acres. I can give you Lodge Creek exactly now; 7,433 acres of Lodge Creek in Canada.

Mr. SANDS. In the United States what of the irrigation from Battle Creek?

Mr. BURLEY. So far as schemes that are in working order are concerned they are few and small. I would not care to give a statement as to the area.

Mr. SANDS. Are you familiar with the Downen and Buckley people?

Mr. BURLEY. Yes.

Mr. SANDS. How much do they irrigate?

Mr. BURLEY. Not one single acre at present. Their dam is destroyed and their ditch is not in good condition.

Mr. SANDS. When were you there?

Mr. BURLEY. In 1914.

Mr. SANDS. Were you there before or after the irrigation season?

Mr. BURLEY. During the irrigation season.

Mr. SANDS. How about the Roketa ditch?

Mr. BURLEY. I can not say as to what they are doing now.

Mr. SANDS. You do not know whether it is in operation or not?

Mr. BURLEY. No.

Mr. SANDS. Farther down the valley, do you know of any ditches taken out of Battle Creek?

Mr. BURLEY. I know of some, but I can not tell whose they are.

Mr. SANDS. Do you know of any pumping plant along there?

Mr. BURLEY. I do; I was thinking of pumping plants.

Mr. SANDS. Do you know how much they irrigate from these pumping plants?

Mr. BURLEY. I should estimate, possibly at the outside figure, 500 acres.

Mr. SANDS. Do you know of any other canals farther down the stream?

Mr. BURLEY. Mathewson and Cook.

Mr. SANDS. What area do they irrigate?

Mr. MACINNES. Is that not taken over by the irrigation service?

Mr. SANDS. No.

Mr. MACINNES. They are included in the evidence put in yesterday.

Mr. SANDS. Yes; but I want to correct that statement. The water rights are not taken over by the United States Reclamation Service at all.

Mr. MACINNES. I understood that the water is to be supplied from the Reclamation Service system.

Mr. SANDS. Only such additional service as may be required.

Mr. MACINNES. I understood there was an agreement to that effect.

Mr. SANDS. Such additional water as may be required only.

Mr. MACINNES. But still they might come, although they might not come at once.

Mr. SANDS. They would not come at once, but I wish to establish the fact that there are systems in the Battle Creek which we now utilize.

Mr. BURLEY. I can not add anything to the Reclamation Service report as to the area.

Mr. SANDS. If you have it, state what is the area of the land covered by the Cook Canal.

Mr. MACINNES. May I suggest to the commission this is evidence in regard to projects now in existence, and while we are willing that Mr. Burley should give evidence on the subject, it seems to me that it is not the best evidence the commission could get. If witnesses from the United States, who have full knowledge of the matter, would give to the commission the evidence they have, it would be the best evidence available. We are only getting second-hand evidence from Mr. Burley on this point, however willing he is to give it.

Mr. SANDS. My purpose is to draw out from this witness, who seems to have a broad knowledge of the whole subject, the possible plan that the commission may adopt or that the parties who have the division to make may adopt.

Mr. TAWNEY. Have you not some other witness on our side of the line who is more familiar from personal knowledge with the situation with respect to the plan you have in mind?

Mr. SANDS. Yes, sir; we have.

Mr. TAWNEY. Would it not be better to get as the best evidence evidence from someone who has personal knowledge and who is intimately acquainted with the situation?

Mr. SANDS. Yes, sir; we can do that. We have put in considerable evidence, and we did not know we could put in any more.

Mr. TAWNEY. You can put in all the evidence you have bearing on the matter. The commission will not exclude any material evidence as to the facts bearing on these waters. It has occurred to me that if you have any witness who is familiar with the situation on our side, with respect to the plan that you suggest you have in mind for the distribution of these waters, it may be better to call that witness than to hear Mr. Burley, who is not familiar with the situation on our side of the line.

Mr. SANDS. Then, Mr. Burley, going to the Frenchman, what development have you in Canada from that stream?

Mr. BURLEY. Eleven thousand five hundred and ninety-four acres.

Mr. SANDS. What would you say of the irrigation of that 11,000 acres; is it irrigated every year?

Mr. BURLEY. No, sir.

Mr. SANDS. What proportion of it would you think was irrigated on an average every year?

Mr. BURLEY. As I have stated before, that 11,000 acres includes systems under construction which under our laws are in perfectly good standing, and at a rough estimate I should say that 40 per cent possibly were using water.

Mr. SANDS. And your estimates of Battle Creek were based on the same lines?

Mr. BURLEY. Yes; I stated that before I gave my evidence.

Mr. TAWNEY. Is the source of this stream in the United States or in Canada?

Mr. SANDS. The Frenchman Creek rises in Canada and flows across the line to meet the Milk River. [To Mr. Burley.] From your knowledge, Mr. Burley, of the streams that cross the international boundary line, would you not think it more feasible that a larger proportion of the Frenchman and Battle Creek be given to the Canadians, and a larger proportion of the Milk River, where it crosses the Canadian line, and of the West Fork, to the Americans, to the advantage of both parties?

Mr. BURLEY. You say "a larger proportion?"

Mr. SANDS. That is to say, more than one-half.

Mr. BURLEY. A larger proportion of Battle Creek and the Frenchman River to Canada, and a larger proportion of Lodge Creek to the United States?

Mr. SANDS. Lodge Creek and the Milk River. I mean larger than is fixed by the treaty. In other words, change the proportion as to these streams.

Mr. BURLEY. I still think that is not a question for me to answer. It seems to me that is a question for the commission to answer.

Mr. SANDS. I was asking you if you did not think it would be to the mutual advantage of both parties that this could be done that way, speaking from your general knowledge of the situation.

Mr. BURLEY. I think your statement is probably correct; speaking offhand, yes.

Mr. MACINNES. Mr. Sands, you used the term "West Fork" just now; that is the same as Lodge Creek?

Mr. SANDS. Yes.

Mr. POWELL. It would be well, Mr. Sands, if you should put in your contention in respect to that point, so that we might have it before us on the record.

Mr. SANDS. I will do so later. I may say that the plan is not definitely fixed, but only in a general way. That is the way I think the plan could be worked out.

Mr. TAWNEY. For my own information, and in order to get a grasp of the situation in my mind clearly, are you prepared to state how many tributaries of the St. Mary River there are that rise wholly in Canada and do not cross the boundary?

Mr. BURLEY. And do not cross the boundary at all?

Mr. TAWNEY. Yes; from the boundary line to the confluence of the St. Mary—the whole upper section of the St. Mary.

Mr. BURLEY. There are two, including their branches.

Mr. TAWNEY. What are their names?

Mr. BURLEY. Pinepound and Pothole Creeks.

Mr. TAWNEY. They are the only tributaries of the St. Mary River that are wholly in Canada?

Mr. BURLEY. I would not say that; there may be small coulees, but they are the only streams that are named; they are the only streams of any consequence.

Mr. TAWNEY. What is the distance from the boundary line to the confluence of the St. Mary River and the Belly River?

Mr. BURLEY. You do not mean following the river?

Mr. TAWNEY. No; approximately.

Mr. BURLEY. About 40 miles.

Mr. TAWNEY. And there are only two tributaries of any consequence, and they are those you named?

Mr. BURLEY. Yes.

Mr. TAWNEY. Do you know how much water, approximately, they contribute to the St. Mary River?

Mr. BURLEY. Possibly 6,000 acre-feet.

Mr. POWELL. Throughout the whole year?

Mr. BURLEY. Yes; that is the yearly flow. There are streams which have a spring run-off; they rush off when the snow melts and they run down all in a bunch.

Mr. TAWNEY. How many tributaries are there to the North and South Forks of the Milk River before that crosses the line that are wholly in Montana?

Mr. BURLEY. The Middle and South Forks of the Milk River rise wholly in Montana.

Mr. TAWNEY. And these forks both cross the boundary and unite and form the Milk River in Canada?

Mr. BURLEY. Yes.

Mr. TAWNEY. It is not the Milk River before the waters of these two forks reach Canada?

Mr. BURLEY. It is called the North and South Branches of the Milk River until they join.

Mr. TAWNEY. And they join in Canada?

Mr. BURLEY. Yes.

Mr. TAWNEY. How many tributaries are there in Canada of the Milk River, and what amount of water do they contribute to the Milk River in Canada?

Mr. POWELL. That is, you say, wholly in Canada?

Mr. TAWNEY. Wholly in Canada and do not come across the line.

Mr. BURLEY. There are only two or three small coulees.

Mr. TAWNEY. That occur wholly in Canada?

Mr. MACINNES. That is, up to the eastern crossing?

Mr. BURLEY. Up to the eastern crossing.

Mr. TAWNEY. I mean from where the Middle Fork and the South Fork cross the line to the eastern point where the Milk River crosses back again from Canada into Montana.

Mr. BURLEY. That is what I understood by your question.

Mr. TAWNEY. And there are no tributaries?

Mr. BURLEY. No tributaries of any importance rising wholly in Canada.

Mr. TAWNEY. How many tributaries are there of the Milk River wholly in Montana south of the boundary and between the boundary and the confluence of these rivers?

Mr. BURLEY. Including northern and southern tributaries?

Mr. TAWNEY. All tributaries that are solely in Montana.

Mr. BURLEY. I think you may almost say they are innumerable.

Mr. TAWNEY. Has any gentleman on either side any estimate of the quantity of water which is contributed to the Milk River by these tributaries which are wholly in Montana?

Mr. SANDS. The State reports will show something, but not very much.

Mr. WYVELL. There has been no complete measurement.

Mr. TAWNEY. I know there has been no complete measurement, but I thought there might be an approximate estimate. I want to get for my own satisfaction the relative amount of tributary waters that rise wholly in each country.

Mr. CONNER. The amount of water tributary to the Milk River, wholly in the United States, from the eastern crossing of the Milk into the United States to the junction of the Milk River with the Missouri, amounts to 525,000 acre-feet.

Mr. SANDS. It would be impossible to compute that, because the flow is so irregular in all these streams.

Mr. TAWNEY. I mean the average flow.

Mr. MACINNES. Where did these figures come from, Mr. Conner, that you gave?

Mr. CONNER. I will have to correct that statement, I am in error. It is 420,000 acre-feet and not 525,000, as I stated.

Mr. MACINNES. Where are these figures estimated from?

Mr. CONNER. My estimate of the run-off at the mouth is 650,000 acre-feet, and they are based on that.

Mr. BURLEY. Does that include the northern tributaries rising in Canada?

Mr. CONNER. No; I left them out.

Mr. MACINNES. How much did you take out for them?

Mr. CONNER. A total of 230,000 acre-feet.

Mr. MACINNES. How much did you allow on the same basis for the Milk River proper without any of these tributaries?

Mr. CONNER. I would not be able to give any estimate of what is in the river itself.

Mr. MACINNES. These figures which you have given include the Milk River and these tributaries?

Mr. CONNER. That is what the chairman asked.

Mr. MACINNES. No.

Mr. TAWNEY. What I desired was the amount of water contributed to the Milk River by the tributaries wholly in Montana, from the eastern crossing to the junction of the Missouri and Milk Rivers.

Mr. CONNER. That is what I say.

Mr. MACINNES. But he says that that includes the water which is flowing in the Milk River.

Mr. TAWNEY. I did not understand that. What I wanted to get at was the amount of water that was contributed to the Milk River in Montana by the tributaries that are solely in that State.

Mr. CONNER. I think Mr. MacInnes is trying to separate the water that is in the river itself from that of its tributaries.

Mr. MACINNES. Yes.

Mr. CONNER. That is impossible. I think Mr. Tawney's question is that he wanted to know the amount of water contributed to the Milk River by the drainage area within the United States, after the river crosses to the United States.

Mr. TAWNEY. That was the purpose of my inquiry, but you exclude the water that comes from the drainage area in Canada, in the bed of the Milk River.

Mr. CONNER. That is my understanding.

Mr. WYVELL. And 420,000 feet is your best estimate?

Mr. CONNER. Yes; I assume 230,000 for Canadian territory and a total of 650,000 at the mouth, leaving 420,000 from the drainage area within the United States.

Mr. WYVELL. You mean by that 420,000 acre-feet of water which never passes out of the State of Montana until it reaches the Missouri River?

Mr. CONNER. Yes.

Mr. SANDS. I wanted to ask one question further of Mr. Burley. Mr. Burley, in giving your estimate of the flow of the Milk River at Hinsdale in 1912, you said the run-off was what?

Mr. BURLEY. The total run-off?

Mr. SANDS. Yes; for 1912.

Mr. BURLEY. About 1,211,000.

Mr. SANDS. Do you know what it was for 1913?

Mr. BURLEY. I could not tell you offhand.

Mr. SANDS. I have the report here and it shows only 356,000 for the next year.

Mr. BURLEY. That is approximately correct.

Mr. SANDS. And that is fairly suggestive, I suppose, of the character of the river, namely, that it is very variable—very large sometimes and small at others.

Mr. BURLEY. That is quite correct.

Mr. SANDS. The figures that you gave us for 1912 were due to a very large and unusual flood in 1912, were they not?

Mr. BURLEY. It is not the usual quantity in the annual floods; it has occurred before, however, and it is likely to occur at any time on the Milk River.

Mr. SANDS. Have you any figures which show as high a figure as that for any other year?

Mr. BURLEY. No; because the records do not extend back of 1906.

Mr. SANDS. It was practically four times as high in 1912 as in 1913?

Mr. BURLEY. Yes; assuming that your figures are correct.

Mr. SANDS. In the practical irrigation of lands on a stream as variable as the Milk River, would you say it would require a larger or a smaller quantity of water to properly serve the people to irrigate from it? In other words, could the same use be made of acre-feet in a stream as variable as Milk River as could be made on a stream like the St. Mary?

Mr. BURLEY. It could by the construction of reservoirs, by which you could flatten out the stream flow and average it up over the year.

Mr. SANDS. But without these reservoirs it would not be as serviceable?

Mr. BURLEY. Certainly not.

Mr. SANDS. When you speak of an acre-foot of water from the St. Mary and from the Milk River without reservoirs, the water from the St. Mary per acre-foot would be far more serviceable than the water from the Milk River?

Mr. BURLEY. Without reservoirs, yes; although the St. Mary River is subject to similar floods to those found in the Milk River.

Mr. BIEN. Are they not much more regular on the St. Mary River?

Mr. BURLEY. The difference is not so great; the flood is not so pronounced.

Mr. BIEN. Is there as much difference from year to year?

Mr. BURLEY. No; there is not.

Mr. BIEN. The St. Mary River is more regular.

Mr. BURLEY. Yes; it is more dependable.

Mr. SANDS. Speaking of the duty of water, over what period of time do you base your estimates?

Mr. BURLEY. The irrigation season.

Mr. SANDS. What do you term the irrigation season?

Mr. BURLEY. In Canada, from the 1st of May to the 30th of September.

Mr. BIEN. Is that established by law?

Mr. BURLEY. It is established by regulations under the law.

Questioned by Mr. WYVELL:

Mr. WYVELL. Mr. Burley, in speaking of the irrigation plans of the Dominion Government on Lodge Creek, you mentioned 7,433 acres as being within the plan?

Mr. BURLEY. Yes, sir.

Mr. WYVELL. You do not mean that that number of acres has actually received any water for the purpose of irrigation yet?

Mr. BURLEY. No.

Mr. WYVELL. About how many of those acres in the largest year actually receive water from the irrigation?

Mr. BURLEY. About 40 per cent did, I stated.

Mr. WYVELL. Last year, 1914, about what percentage received water?

Mr. BURLEY. I might explain here that that is a new country on our side of the line, and that these schemes are in process of construction, so that for that reason they are in a position to take only 40 per cent of the water which they will eventually put to efficient use.

Mr. WYVELL. Did 40 per cent of 7,433 acres actually receive water last year?

Mr. BURLEY. I can not say; I was not there.

Mr. WYVELL. With reference to Battle Creek, you spoke of an acreage of 9,359 acres which might receive, under your plan, water from Battle Creek, but you do not intend to say that 9,359 acres has ever yet received water?

Mr. BURLEY. It is in the same condition as Lodge Creek, excepting that the percentage actually taken is somewhat higher.

Mr. WYVELL. And on Frenchman Creek, you spoke of 11,000 acres which were within the plans of the Dominion Government?

Mr. BURLEY. Not within the plans of the Dominion Government.

Mr. WYVELL. Well, that may receive water for irrigation above the international boundary; what percentage of this land actually received water last year?

Mr. BURLEY. I stated 40 per cent.

Mr. WYVELL. With reference to Rock Creek, have you any irrigation plans on that creek?

Mr. BURLEY. No.

Mr. WYVELL. Have you any contemplated on Rock Creek?

Mr. BURLEY. Not at the present time.

Mr. WYVELL. Giving your opinion entirely impartially for the enlightenment of all of us, what would be your opinion as to the best method, looking purely from the standpoint of producing the best results, regardless of where the land is, of the water of Rock Creek; would it give better results in the United States than in Canada?

Mr. BURLEY. Most decidedly.

Mr. WYVELL. With reference to Frenchman Creek, where could the water produce, in your opinion, the best results from the standpoint of growing crops?

Mr. BURLEY. In Canada.

Mr. WYVELL. What percentage of the total flow of Frenchman Creek do you think you need in Canada?

Mr. BURLEY. That we need now or will need?

Mr. WYVELL. That you need now.

Mr. BURLEY. I suppose 15 per cent at the present time would fill the land that is irrigated.

Mr. TAWNEY. What percentage do you consider necessary to the complete development of the land on your side?

Mr. WYVELL. I was just about to ask that question.

Mr. BURLEY. Speaking offhand, I think from about 75 to 80 per cent.

Mr. WYVELL. You had better limit this to the irrigation season.

Mr. BURLEY. I am speaking of our irrigation season.

Mr. WYVELL. And you think you could use eventually 75 per cent?

Mr. BURLEY. From 75 per cent to 80 per cent.

Mr. WYVELL. What percentage of the water of Frenchman River, from such knowledge as you have, could produce the best results in Canada and what percentage would produce the best results in the United States; could you say that or am I drawing the distinction too fine?

Mr. BURLEY. It is rather a difficult question, Mr. Wyvell; I have not got these data right with me.

Mr. WYVELL. We will suspend that question, then; I may want to take it up later. With reference to Battle Creek, speaking entirely impartially and with a desire to furnish such information as you think would be helpful, where could the water be best employed from the standpoint of best use to the land—in Canada or in the United States?

Mr. BURLEY. The larger area, I should say, was in Canada, excluding, as Mr. Sands has pointed out, that these people on the lower Battle Creek still hold their water rights. If we could exclude these, the greater use could be made in Canada, and I understand these were to be included in the Reclamation Service.

Mr. WYVELL. For such plans as you have in operation, what percentage of water do you need during the irrigation season from Battle Creek?

Mr. BURLEY. I am not prepared to answer that offhand; I probably would be wrong.

Mr. WYVELL. I want to ask you as to a second thought suggested by Mr. Tawney, as to what percentage you think you will need when your plans are fully consummated?

Mr. BURLEY. That is in the same category; I can not speak offhand.

Mr. WYVELL. And I suppose you can not speak any more definitely with regard to Lodge Creek?

Mr. BURLEY. No; I could hand in a written statement to the commission.

Mr. WYVELL. Will you be good enough to get that?

Mr. BURLEY. If you will hand me the questions I will furnish the answer.

Mr. WYVELL. Is it not true that the floods which supply a great portion of the water to the Milk River system, below the eastern crossing, come very suddenly? I am not speaking of months, because

I understand they do not come the same months, but a large percentage of water in the Milk River below the eastern crossing from the tributaries exclusively in Montana comes as a result of a sudden flood, do they not, like the 1912 flood?

Mr. BURLEY. Very often; yes.

Mr. WYVELL. You could almost say that will occur annually?

Mr. BURLEY. It depends on your definition of the word "sudden"; it will probably extend over one or two months.

Mr. WYVELL. The flow will extend over one month?

Mr. BURLEY. Possibly.

Mr. WYVELL. And that month is liable to be what?

Mr. BURLEY. February, April, June, or possibly September.

Mr. WYVELL. More often in one of these months than in one of the other months?

Mr. BURLEY. I should say that I do not know of a February flood.

Mr. WYVELL. But you have known of a September flood and of an April flood?

Mr. BURLEY. Yes, sir.

Mr. TAWNEY. Before we take recess I desire to ask Mr. Newell if he has with him a map showing the elevation of the water of the Milk River?

Mr. NEWELL. I think we have a hydrograph showing the elevation.

Mr. TAWNEY. I would suggest that Exhibits A and B ought to be presented to the commission in duplicate if you can; one for the office at Ottawa and one for the office at Washington.

Mr. MIGNAULT. A copy should be sent to each of the commissioners.

Mr. MACINNES. That will be done. Mr. Burley spoke of the stream-flow record for 1914 which had been completed and which had not been printed. I have here, and I shall put in, the complete stream flows on the Canadian side.

(The commission took recess for luncheon until 2 p. m.)

AFTER RECESS.

The commission reconvened at the expiration of the recess, all the members being present.

Mr. NEWELL. Mr. Chairman, in response to the request of the commission, I have some prints of diagrams, copies of which will be sent to the commission. The first shows the relative flow in the St. Mary and Milk Rivers for the years 1909, 1910, 1911, 1912, 1913, and 1914, explaining the variation in quantity of water as measured on the St. Mary at the international boundary and on the Milk River at the point where it passes the eastern boundary, and also some similar diagrams from the Milk River at Havre for the years 1908 to 1913, inclusive.

Mr. TAWNEY. The diagrams show on the left-hand side the number of cubic feet per second?

Mr. NEWELL. Yes, sir; and give at the top the years and months.

Mr. TAWNEY. The year in which these various results were obtained?

Mr. NEWELL. They are to show graphically and to bring to the eye the facts supplied in the water-supply papers and other reports before you.

(These papers were filed as Exhibit I.)

Mr. MACINNES. From what materials are these hydrographs compiled?

Mr. NEWELL. From the printed reports of the United States Geological Survey and papers, and also in the reports of progress of streams measured. I think the figures which were contained in Mr. Peters's report practically agree with them.

Mr. MACINNES. They are based on the figures as contained in these reports without change.

Mr. NEWELL. Without change.

Mr. MACINNES. Are there any estimates made as to any of these months, do you know?

Mr. NEWELL. They simply show graphically the figures given in these reports.

Mr. MACINNES. And where there are no figures a space is left?

Mr. NEWELL. Yes.

Mr. MACINNES. I had intended to proceed now with the physical features of the case, but perhaps I may be allowed to proceed a little out of order. There was some discussion yesterday afternoon, when the the Attorney General for Montana was here, as to the Montana law, and I understand we have in the court room an eminent Montana counsel, Mr. Gunn. I would like to be allowed to call him to identify the laws of the State of Montana and the State law relating to the matter.

STATEMENT OF M. S. GUNN, COUNSEL, HELENA, MONT.

(Mr. M. S. Gunn (counsel of Helena, Mont.) was called and questioned by Mr. MacInnes.)

Mr. MACINNES. You are a member of the bar of the State of Montana?

Mr. GUNN. Yes, sir.

Mr. MACINNES. How long have you been a member of that bar?

Mr. GUNN. For 25 years.

Mr. MACINNES. You are familiar with the irrigation laws of that State?

Mr. GUNN. Yes, sir.

Mr. MACINNES. Can you tell the commission, for its information where they will find the legislation so far as contained in the statutes of the State of Montana relating to irrigation.

Mr. GUNN. The statutory law on the subject of water rights is contained in the Revised Code of Montana of 1907, two large volumes. But the sections relating to water rights are also published in pamphlet form. They will be found in this book entitled "Mining Laws" at page 83. There is there printed the section relating to the statutory method of acquiring a water right. That is the only publication in pamphlet form I know of, of the laws of Montana relating to water rights.

(Book marked "Exhibit J.")

Mr. MACINNES. Can you refer the commission to any decision of weight which will elucidate the irrigation laws, both as based on common law and on the provisions of the legislation?

Mr. GUNN. I would respectfully refer the Commission to the case of *Bailey v. Tintinger* (45 Mont., 155), and also published in the

Pacific Reporter, volume 122, at page 575. In that decision is a construction and interpretation of the statute law of the State relating to the water rights, and also an historical review of the water-rights law of Montana. This decision has never been reversed. The supreme court, in this decision, recognizes that there are two methods of acquiring a water right, one is the statutory method, and the other is the method which was followed before the adoption of the statute. The method followed before the adoption of the statute was merely the diverging and using of the water, and the right dated from the commencement of the work for the purpose of making the diversion. The statute authorizes a notice of appropriation to be filed with the county clerk and recorder of the county in which the water right is situated and provides that work must be commenced within 40 days and that when the work is commenced within that period it shall be prosecuted diligently. The right dates from the date of the notice instead of the date of the commencement of the work. There is the further distinction, that where the appropriation is made in accordance with the statute, the right obtained before the possession is taken of the water. That is, the right to the use of the water is complete when the method of appropriation has been completed, whereas, under the other method, the right is not complete until there has been actual diversion of the water and the application to a beneficial use. The supreme court has said that the statutory method is cumulative and that the other method of acquiring a right will obtain. The constitution of the State declares that the use of water in Montana is a public use, and we recognize a right to the use of the water as distinguished from ownership of the corpus of the water.

MR. MACINNES. Is there any other decision on the subject to which you would like to refer?

MR. GUNN. There is a decision in the case of *Conrow v. Huffein* (48 Mont., 437). In that case the supreme court of the State announced that in the absence of proof as to the quantity of water required to successfully irrigate an acre of ground, the court would assume, as a standard, 1 inch per acre, and the statute to which I have referred provides that 100 inches are the equivalent of $2\frac{1}{2}$ cubic feet per second. In this decision in *Bailey v. Tintinger* there is a reference to the earlier decisions of the supreme court of the Territory and of the State on the subject.

MR. TAWNEY. Has the legislature of your State or the supreme court of your State defined, either by statute or by decision, just what is comprehended in the term "beneficial use"?

MR. GUNN. No; not that I know of. The constitution uses the term "beneficial use."

MR. TAWNEY. Has it or has it not any technical signification in respect to the use of water for irrigation purposes?

MR. GUNN. No. The beneficial use is any use that is beneficial; that is, any use that tends to the welfare of the people or the development of the State.

MR. TAWNEY. Is it not a fact that the State of Oregon, by statute, has defined the term "beneficial use" or rather fixed by the statute the relative value of the use by prescribing that first in importance it shall be for domestic purposes and irrigation of crops, and then for the irrigation of the land?

Mr. GUNN. That may be, but I am not certain. The question which arose in Montana a number of years ago, as to the right to acquire by condemnation water appropriated for irrigation, for a municipal supply, was decided that the right to supply a municipality was a right superior to the right for irrigation, and that rights appropriated for irrigation could be taken for the beneficial use of a city.

Mr. TAWNEY. The use for the municipality was regarded as higher than the right for irrigation purposes?

Mr. GUNN. Yes.

Mr. MIGNAULT. The common law is the same.

Mr. GUNN. I may say further, if any member of the commission cares to pursue the subject, that the doctrine of riparian rights is discussed in the case of *Smith v. Dennis*, 23 or 25 Montana, I forget which. The case is also referred to in 50 L. R. A. (Lawyers' Reports Annotated).

Mr. TAWNEY. I have heard gentlemen from the West, who are familiar with the law, use the term "water duty"—have you any knowledge of whether or not that is a technical term, and if so what does it mean?

Mr. GUNN. I have not. I presume it means that the duty would be performed by a certain quantity of water, as, for instance, the Supreme Court of Montana assumed that 1 inch of water would perform the duty of irrigating 1 acre of land.

Mr. TAWNEY. That is what I want to get on the record for my own information. I had a vague idea of what it meant, but I was not sure.

Mr. POWELL. It means power of irrigation.

Mr. GUNN. Power of water to perform this function of beneficial use.

Mr. MIGNAULT. What is exactly, according to your law, prior appropriation as applied to water?

Mr. GUNN. It is really what the words signify. It is the one first in time is first in right, and the one first in time has the prior appropriation.

Mr. TAWNEY. He is protected in the exercise of that right as against anyone else, either above or below him on the same stream?

Mr. GUNN. Yes; subsequent appropriators; that is, later in date.

Mr. MIGNAULT. The question is, must he have applied the water to beneficial use in order to have title in the water which he has appropriated?

Mr. GUNN. That is discussed in Forty-fifth Montana, *Bailey v. Tintinger*. In that case the supreme court decides that unless the appropriation is made in the method provided by the statute that the appropriation is not complete until it is applied to beneficial use; but where the statutory method is followed that, then, the right to the use of the water is complete before possession of the water is taken or before it is applied to beneficial use, recognizing the right of appropriation for sale as well as for irrigation and other purposes. I might also add that the statute declares that this notice of appropriation provided for by the statute shall be prima facie evidence of the facts stated, so that where there is notice of appropriation and that notice is produced in evidence it is prima facie evidence of the

facts required to be stated in the notice. But we have no record title of a water right in Montana; it all depends on oral testimony, even though the appropriation is what we term a statutory appropriation, except, as I say, that the notice is *prima facie* evidence.

Mr. MIGNAULT. If I give notice for an appropriation of 100 second-feet, would they give me a title without my being able to show that I have actually used the water?

Mr. GUNN. If you give notice of appropriation of 100 second-feet, then, under the statute you must commence the work of making that appropriation available, I think, within 40 days. Then, you must pursue that work with reasonable diligence, which is determined by the conditions existing, until you have completed your means of diversion; and if, as a matter of fact, the ditch or the means you are using to divert the water is less than 100 feet per second, your right is limited to the quantity you could carry in your ditch without regard to what you have declared in your notice. In other words, the right is always limited to the means of diversion of the quantity as measured by the capacity of the ditch or other means through which the diversion is made.

Mr. POWELL. I do not quite understand the principle upon which your court bases this right. Is it an extension of the common-law right of user by the riparian proprietor for domestic and farm purposes, or is it a right, as in the case of abandoned property which belongs to nobody, where the man whose priority of possession is prior in right? Is it based on that, or is it a combination?

Mr. GUNN. It is a right which originated in the mining regions of California. For conducting their mining operations they found it necessary to take water from the streams, and custom was held there, which was crystallized afterwards into statutory form.

Mr. POWELL. It is rather an application of the old principle, such as the principle on which the courts decided that bonds payable to bearer were negotiable as a promissory note.

Mr. GUNN. That may be.

Mr. POWELL. At any rate, it is recognized in the courts.

Mr. GUNN. Yes, and it was recognized by the courts before there was any statutory law in Montana on the subject. In the case of *Smith v. Dennis*, it was declared, if I remember aright, that the doctrine of riparian rights should not obtain in Montana except to the extent that is consistent with this right of appropriation, which was recognized.

Mr. POWELL. It is a case of the riparian ownership.

Mr. GUNN. Not necessarily, because the water can be appropriated for sale.

Mr. POWELL. An absolute appropriation?

Mr. GUNN. Yes; the constitution recognizes that.

Questioned by Mr. WYVELL:

Mr. WYVELL. You represent one of the water associations here?

Mr. GUNN. No; I am here associated with Mr. Walker for the Canadian Pacific Railway Co.

Mr. MAGRATH. Where are these rights recorded against streams in Montana?

Mr. GUNN. In the office of the county clerk and recorder in the county in which the appropriation is made—that is, the notice of

appropriation—and that is the only provision there is for recording any paper affecting water rights.

Mr. TAWNEY. I understand that notice of appropriation does not in itself secure the person giving the notice the right of appropriation; it must be followed by the actual appropriation, in order to give the party the right.

Mr. GUNN. Yes; and the statute limits the time within which the work must be commenced.

Mr. TAWNEY. If it is not commenced within that time?

Mr. GUNN. The notice is of no effect whatever.

Mr. TAWNEY. Is not that, in effect, the common law?

Mr. GUNN. No; the difference between the statute and the common law is that under the common law the rights dated from the commencement of work and by the doctrine of relation back, the date of the appropriation is fixed as of the date when the first work is done, whereas, under the statute, by virtue of the doctrine of relation back, the date is fixed as of the date of filing the notice, although the work of making the appropriation available is not commenced for 40 days.

Mr. POWELL. And if you did not do anything within 40 days it lapses?

Mr. GUNN. Yes.

Mr. TAWNEY. Under the common law, the right of expropriation extends only in the event and to the extent to which the applicant or the party makes it possible to appropriate the water for the use for which it is meant.

Mr. GUNN. Yes.

Mr. POWELL. Another point, which depends on another question that came up before us—does this right give an absolute right to the water, or is it only a right to the water when it is passing over the property, like the interest in a fox or animal *feræ naturæ*, which simply attaches to the land. In fact, in the Province of Ontario, they held that a fox was land. Is it an absolute right in the water so that they could follow that water, or is it simply a right to take the water as it is passing over certain property?

Mr. GUNN. It is a right to the use of the water as distinguished from any ownership in the corpus of the water itself. The use of water is declared to be a public use and the law recognizes a property right in the use of the water as distinguished from the water itself.

Mr. POWELL. You have struck the origin of the law; it is in the constitution; it vests the proprietorship in the Commonwealth, and then the Commonwealth lets the first occupant take it. Suppose there are two States occupying relatively the position of upper and lower riparian owners. How would it be in that case? Would the granting or the acquisition of the title to water in the superior State be recognized in the inferior State?

Mr. GUNN. That very question was before the Supreme Court of the United States in the case of *Kansas v. Colorado* (206 U. S.), and there is a very interesting discussion on the doctrine. In that case the Federal court assumed jurisdiction, and proceeded upon the principle that there should be equality of rights in the water as between two neighboring States.

Mr. POWELL. Has the superior State the right as easement over the lands below to have that water pass from it down over the inferior State.

Mr. GUNN. That question is discussed in that case. In Colorado they recognized the right of appropriation, as we do in Montana. The Arkansas River flows from Colorado into Kansas.

Mr. POWELL. My Wyvell made a statement yesterday with regard to the common law, and I want to see what view the courts of the United States have taken on the question as between the States. We will go further, we will supplement that with the reverse case. Has the inferior State, being a riparian proprietor, the right to compel the superior State, being a riparian proprietor, to pass the water down to it?

Mr. GUNN. Yes; subject to a reasonable use; and the Supreme Court of the United States declared that there should be equality, as nearly as possible, in the use of the water between two States.

Mr. POWELL. That, then, is the law of the whole Republic?

Mr. GUNN. As I understand it, as declared in that case.

Mr. MACINNES. Regardless of the amount of water which may take its rise in the upper State as compared with the lower State?

Mr. GUNN. Yes; as I understand it.

Questioned by Mr. SANDS:

Mr. SANDS. Do I understand from you that the right to the use of water might exist in the State of Montana, without any record whatever?

Mr. GUNN. Yes.

Mr. SANDS. The record is simply prima facie evidence?

Mr. GUNN. Yes.

Mr. SANDS. But not perfect evidence.

Mr. GUNN. The statute declares it shall be prima facie evidence of the facts required to be stated in the notice, and, of course, it is subject to rebuttal by testimony. As a matter of fact, the right of appropriation is dependent entirely upon oral testimony.

Mr. SANDS. There are two existing methods of acquiring a right, one by actual user and the other by posting notice and proceeding with the work.

Mr. GUNN. One is the statutory method and the other is the method before the statute.

Mr. SANDS. In speaking of the domestic rights you say it was determined in one case that domestic rights are higher than rights of irrigation; and do I understand that an irrigation right might not be acquired, say, the day before a domestic right, and maintained?

Mr. GUNN. Yes.

Mr. SANDS. And in order to get that right they could be condemned, but the rights could be appropriated just the same on different days, could they not?

Mr. GUNN. The statutes of Montana declare that property devoted to a public use can be taken for necessary public use, and the constitution recognizes that the use of water is a public use, and the supreme court held that, notwithstanding the use of water for irrigation as a public use, that the city of Helena could proceed by condemnation to acquire rights in water, where the water had been appropriated for irrigation, for a municipal supply for the city, proceeding upon the assumption that the use for the whole community was a more necessary public use than the use for irrigation alone.

Mr. SANDS. But the right of appropriation is equal, so far as domestic rights and irrigation rights are concerned?

Mr. GUNN. I understand so.

EXAMINATION OF E. F. DRAKE.

(Mr. E. F. Drake, superintendent of irrigation for the Dominion Government, Ottawa, Canada, questioned by Mr. MacInnes.)

Mr. MACINNES. Mr. Drake, will you state to the commission your official position, how long you have held it, and for how many years you have had knowledge of the subject matter now before the commission.

Mr. DRAKE. I am known as the superintendent of irrigation for the Dominion Government, and I have held that position since 1912, although I have been in the civil service of Canada and in the employ of the Dominion Government for 27 years and have been connected with the irrigation branch of the department of the interior for the last 8 years, in fact since early in 1907. I may say that the irrigation branch was not established as a separate branch of the department of the interior until 1912. Up to that time it was dealt with departmentally as part of another branch of the department.

Mr. MACINNES. The irrigation statutes of the Dominion of Canada are before the commission, Mr. Drake, and will you state, as briefly as you can, the substance of these statutes and the procedure for obtaining irrigation rights in Canada.

Mr. DRAKE. I have prepared a brief synopsis of them all, and a fuller statement can be furnished to the commission if required. The statement is as follows:

WATER RIGHTS.

The procedure for the acquisition of water rights under the Canadian law is, briefly:

1. The filing by the applicant of a memorial describing the proposed project and setting forth:

- (a) The name, residence, and financial standing of the applicant.
- (b) The source of water supply, the proposed point or points of diversion, and the nature and extent of the proposed works.

- (c) The quantity of water required, the use to which the water is to be put, and in the case of an irrigation project, the character and location of the lands and the approximate area to be irrigated.

2. The filing of general plans showing in a preliminary way the nature of the proposed works and detailed plans of structures, etc.

3. If the provisions of the law have been complied with, the memorial and plans are recorded in the office of the commissioner of irrigation and duplicates are forwarded to the department of the interior at Ottawa for record. Each application is given priority in accordance with the date of the filing of its memorial and plans with the commissioner, and is protected in its priority so long as it complies with the requirements of the law.

4. Authorization for the construction of the works is then issued by the minister of the interior, and a period of time is fixed in such authorization within which the works shall be completed.

5. The works are inspected periodically during construction, and when completed, or when the period for construction has expired,

a final inspection is made for the purpose of determining whether the works have been constructed in accordance with the plans and that they are sufficient for the purpose.

6. The commissioner of irrigation is required to certify to the satisfactory completion of the works (if such is the fact), and a license is then issued to the applicant. This license authorizes the diversion and use of a stated quantity of water for a prescribed use on a described tract of land and is cancellable only for abandonment or nonuse. The water is made appurtenant to the described land and may not be otherwise used or disposed of.

7. If an applicant for water rights desires to use his uncompleted works prior to the issue of a water license the minister of the interior may authorize him to do so, but the applicant then becomes subject to all the provisions of the law applicable to licenses.

8. Under Canadian law power is vested in the minister of the interior to define the "duty of water," or the quantity of water required to irrigate a given unit of land. The present "duty of water" is about 2 acre-feet of water for 1 acre of land.

There will be filed as exhibits schedules of water rights on the St. Mary and Milk Rivers and their tributaries in Canada. All of these rights have been acquired and are maintained in good standing in accordance with the provisions of the irrigation act.

IRRIGATION PROJECT OF THE ALBERTA RAILWAY & IRRIGATION CO.

The original company, of which the Alberta Railway & Irrigation Co. is the legal successor, was incorporated in 1893 under the name of the "Alberta Irrigation Co.," and in April, 1893, prior to the enactment of any general law governing the granting of water rights for irrigation purposes, the Canadian Government granted permission to the company to construct a system of works for the irrigation of certain lands in the vicinity of Lethbridge, in what is now the southern part of the Province of Alberta. The company did not, however, avail itself of this permission.

The irrigation act was drafted in 1893 and introduced in the form of a bill in the Parliament of that year. It was, however, not enacted into law until 23d July, 1894 (chap. 30, 57-58 Victoria).

Surveys made by the Canadian Government during 1894 and subsequent years demonstrated the feasibility of irrigating a considerable tract of arid land in southern Alberta from the St. Mary and Milk Rivers and certain other streams, but no active steps were taken for the construction of works, although a reservation of 500 second-feet from low water and 1,000 second-feet of water, high water from St. Mary River was made by the Government, by order in council dated 21st September, 1897, to safeguard the future development of this district by means of irrigation.

On 31st of January, 1899, the Alberta Irrigation Co. applied to the Canadian Government, in accordance with the provisions of the irrigation act, for permission to divert from St. Marys River on the southeast quarter of section 36, township 1, range 25, west of the fourth meridian, the total low-water flow available for diversion from that stream, and a further quantity during high-water stage sufficient to make 2,000 cubic-feet per second during that stage. The

water was to be used on a tract of some 500,000 acres of land described in the memorial.

This memorial was filed with the commissioner of irrigation on the 7th February, 1899.

On 3d May, 1899, authorization was granted to the company for the construction of its works, and a period of 10 years was granted for the completion of the said works.

By order in council of 22d May, 1899, the water reserved in accordance with the provisions of the order of 21st September, 1897, was granted to the Alberta Irrigation Co. as part of the quantity applied for by its memorial of 31st January, 1899.

As the company's plans were developed it enlarged the scope of its proposed works and filed separate memorials and plans covering the use of water from other sources of supply than those comprised in the original application, and finally, on 9th September, 1902, it filed an amended memorial and plans comprising all of those previously submitted.

Authorization for the construction of the works, as shown in the amended application, was granted on 23d October, 1902, and a period of 15 years was granted for the construction of the works.

The following is a schedule of the several applications submitted by the company:

| Date of memorial. | Source of supply. | Quantity of water. | Date of authorization. | Period allowed for construction. |
|--------------------|-----------------------|---|----------------------------|----------------------------------|
| 31 Jan., 1899..... | St. Mary River..... | Total flow at low water 2,000 second-feet high to total flow. | 3 May, 1899 | 10 years. |
| 13 Mar., 1900..... | Kipp Coulee..... |do..... | 8 June, 1900 | 10 years from 3 May, 1899. |
| Do..... | Pothole Creek..... |do..... | 15 June, 1900 | Do. |
| Do..... | Nine Mile Coulee..... |do..... | 5 June, 1900 | Do. |
| Do..... | Middle Coulee..... |do..... | do | Do. |
| Do..... | Pinepound Creek..... |do..... | 19 June, 1900 | Do. |
| Sept., 1902..... | Belly River..... | 500 second-feet. | 23 Oct., 1902 ¹ | 15 years. |
| | Milk River..... | 500 second-feet low, 1,500 second-feet high. | | |
| | Rolph Creek..... | Total flow..... | | |
| | Milk Creek Ridge..... |do..... | | |
| | Reservoirs..... | Total capacity..... | | |

¹ Including and amalgamating all previous applications and memorials.

There are filed herewith for record purposes copies of the several authorizations referred to above.

The company has displayed reasonable diligence in the construction of its works and has in all respects complied with the requirements of the law. On 5th October, 1911, the properties of the company, then known as the Alberta Railway & Irrigation Co., were acquired by the Canadian Pacific Railway Co. On that date the former company had expended \$1,106,583.75 on the construction of works, exclusive of annual expenditure for maintenance and operation.

There are 173,600 acres of land irrigable from the constructed works and the extensions now under way, and a much larger area can be served by reasonably economical enlargements or extensions.

The capacity of the canal is 1,200 square feet, except the Rolph Creek flume, which is now under reconstruction.

The total mileage of main canals is about 200 miles.

The company has actually operated its canal system, in part, during the past 15 years and has received a permit to supply and use water in advance of the issue of a license.

I am filing with this memorandum or record copies of the several authorizations that have been referred to, and they are as follows:

EXTRACT FROM A REPORT OF THE COMMITTEE OF THE HONORABLE THE PRIVY COUNCIL,
APPROVED BY HIS EXCELLENCY ON THE 22D MAY, 1899.

On a report dated 2 May, 1899, from the minister of the interior, stating that under the authority of an order in council, dated 21st September, 1897, a quantity of water equal to 500 cubic feet per second during the low-water stage of the St. Marys River in the district of Alberta and 1,000 cubic feet per second during the high-water stage of the said river were reserved for a period not exceeding 10 years from the 21st September, 1897, in order that any person or company who in the meantime might undertake to construct works for the irrigation of a certain tract of land in the vicinity of the St. Marys River containing an area of 250,000 acres might be assured of obtaining a sufficient quantity of water to irrigate the same.

That the Alberta Irrigation Co. have applied to the minister of the interior for permission, under the provisions of the northwest irrigation act, to construct a canal to divert water from the St. Marys River to irrigate about 500,000 acres of land in the district of Alberta, including the greater portion of the tract referred to in the order in council of the 21st September, 1897.

The minister recommends that provided the company is duly authorized to construct the canal the quantity of water reserved by the order in council of the 21st of September, 1897, and as much more as is required to irrigate the tract of land described in their application be granted to the Alberta Irrigation Co.

The committee submit the above recommendation for your excellency's approval.

JOHN J. MCGEE,
Clerk of the Privy Council.

MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 3d May, 1899.

The undersigned, in accordance with the provisions of subsection 2 of section 15 of an act to amend and consolidate the northwest irrigation acts of 1894 and 1895, hereby authorizes the construction, as soon as the necessary right of way therefor has been acquired, of the irrigation works as shown by the memorial and plans submitted by the Alberta Irrigation Co., in connection with their application for permission to divert water from St. Marys River on the southeast quarter of section 36, township 1, range 25, west of the fourth meridian, for irrigation and power purposes, no change or variation therefrom being deemed necessary nor any protests filed against granting the rights applied for, the works to be completed within 10 years from this date.

JAS. A. SMART,
Deputy of the Minister of the Interior.

Noted in regr. 1, fol. 85 and in schedule.

S. M. G.

AUTHORIZATION MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 8th June, 1900.

The undersigned, in accordance with the provisions of subsection 2 of section 15 of an act to amend and consolidate the northwest irrigation acts of 1894 and 1895, hereby authorizes the construction, as soon as the necessary right of

way therefor has been acquired, of the irrigation works as shown by the memorial and plan submitted by the Canadian Northwest Irrigation Co., of Lethbridge, Alberta, N. W. T., in connection with their application for permission to divert water from Etzi-kom or Kipps Coulee on the northeast quarter of section 8, township 6, range 19, and on the southwest quarter of section 30, township 6, range 17, west of the fourth meridian, for irrigation and power purposes, no change or variation therefrom being deemed necessary nor any protests filed against granting the rights applied for, the works to be completed within 10 years from the 3d day of May, 1899.

JAS. A. SMART,
Deputy of the Minister of the Interior.

AUTHORIZATION MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 15th June, 1900.

The undersigned, in accordance with the provisions of subsection 2 of section 15 of an act to amend and consolidate the northwest irrigation acts of 1894 and 1895, hereby authorizes the construction, as soon as the necessary right of way therefor has been acquired, of the irrigation works as shown by the memorial and plan submitted by the Canadian Northwest Irrigation Co., of Lethbridge, Alberta, N. W. T., in connection with their application for permission to divert water from Pothole Creek and its tributaries on the northwest quarter of section 23, township 5, range 22, west of the fourth meridian, for irrigation and power purposes, no change or variation therefrom being deemed necessary nor any protests filed against granting the rights applied for the works to be completed within 10 years from the 3d day of May, 1899.

JAS. A. SMART,
Deputy of the Minister of the Interior.

AUTHORIZATION MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 5th June, 1900.

The undersigned, in accordance with the provisions of subsection 2 of section 15 of an act to amend and consolidate the northwest irrigation acts of 1894 and 1895, hereby authorizes the construction, as soon as the necessary right of way therefor has been acquired, of the irrigation works as shown by the memorial and plans submitted by the Canadian Northwest Irrigation Co. of Lethbridge, Alberta, N. W. T., in connection with their application for permission to divert waters from Nine Mile Coulee on the southeast quarter of section 5 and the northeast quarter of section 27, township 6, range 21, west of the fourth meridian, for irrigation and power purposes, no change or variation therefrom being deemed necessary nor any protests filed against granting the rights applied for, the works to be completed within 10 years from the 3d day of May, 1899.

JAS. A. SMART,
Deputy of the Minister of the Interior.

AUTHORIZATION MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 5th June, 1900.

The undersigned, in accordance with the provisions of subsection 3 of section 15 of an act to amend and consolidate the northwest irrigation acts of 1894 and 1895, hereby authorizes the construction, as soon as the necessary right of way therefor has been acquired, of the irrigation works as shown by the memorial and plan submitted by the Canadian Northwest Irrigation Co. of Lethbridge, Alberta, in connection with their application for permission to divert water from Middle Coulee on the southeast quarter of section 5, township 6, range 20, west of the fourth meridian, for irrigation and power purposes.

poses, no change or variation therefrom being deemed necessary nor any protests filed against granting the rights applied for, the works to be completed within 10 years from the 3d day of May, 1899.

JAS. A. SMART,
Deputy of the Minister of the Interior.

AUTHORIZATION MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 19th June, 1900.

The undersigned, in accordance with the provisions of subsection 2 of section 15 of an act to amend and consolidate the northwest irrigation acts of 1894 and 1895, hereby authorizes the construction, as acquired, of the irrigation works as shown by the memorial and plan submitted by the Canadian Northwest Irrigation Co., of Lethbridge, Alberta, N. W. T., in connection with their application for permission to divert water from Pinepound Creek (or Spring Coulee) and its branches on the northeast quarter of section 17, township 4, range 23, west of the fourth meridian, for irrigation and power purposes, no change or variation therefrom being deemed necessary, nor any protests filed against granting the rights applied for, the works to be completed within 10 years from the 3d of May, 1899.

JAS. A. SMART,
Deputy of the Minister of the Interior.

AUTHORIZATION MEMORANDUM.

DEPARTMENT OF THE INTERIOR,
Ottawa, 23d October, 1902.

The Canadian Northwest Irrigation Co. having filed the necessary memorials and plans, also a general map dated 9th September, 1902, and having complied with all the provisions of the northwest irrigation act, 1898, relating to applications for the right to divert water, is hereby authorized to construct, as soon as such right of way as is required therefor has been obtained, the works as shown by said memorials, plans, and general map, necessary for the proper diversion and utilization for irrigation and power purposes, and is also authorized to so divert and utilize:

(1) All of the water supply in the various reservoirs shown as such upon the said general map;

(2) Five hundred cubic feet of water per second from Belly River;

(3) All of the total low-water flow of the St. Mary River and a further amount of water during high-water stages of the stream sufficient to make 2,000 cubic feet per second during that stage;

(4) Five hundred cubic feet of water per second from Milk River, including the flow of all its branches during low water, and 1,500 cubic feet of water per second during high water and flood stages;

(5) All the available water supply of the North and South Forks of Willow or Rolph Creek and all their branches;

(6) All the available water supply of Pinepound Creek (or Spring Coulee) and all its branches;

(7) All the available water supply of Pothole Creek and all its branches;

(8) All the available water supply of Nine Mile Coulee and all its branches;

(9) All the available water supply of Middle Coulee and all its branches;

(10) All the available water supply of Etzikom or Kipps Coulee and all its branches;

(11) All the available water supply of the various unnamed water courses which run in an easterly direction carrying the waters out of the eastern portion of Milk River Ridge;

as such unnamed watercourses, rivers, creeks, and coulees, and points of diversion therefrom are shown on said general map, no change or variation therefrom being deemed necessary, and consideration of the protest filed against granting the rights applied for having been refused by the minister. The works to be completed within 15 years from the date hereof, subject to the provisions of the northwest irrigation act and the regulations made therewith.

JAS. A. SMART,
Deputy of the Minister of the Interior.

Mr. MACINNES. With regard to other authorizations or applications for use on the St. Marys and on the Milk River, I understand that Mr. Peters, who is familiar with the details of this matter, has schedules which he will put in for the use of the commission. Have you examined these schedules, and can you inform the commission whether these applications are in good standing, under the irrigation laws of Canada?

Mr. DRAKE. Yes; they are all in good standing. Our practice is to make periodical inspections in order to satisfy ourselves that applicants for water rights are displaying reasonable diligence in the construction of works, and if we find they are not doing so and are not able to give any satisfactory reason for that, our policy is to cancel water rights. I might make this qualification, however, that in a new country such as that it is not considered to be good policy to insist upon the continuous construction, as in a new country they have many other things to do in addition to the construction of irrigation works; they have to maintain their families and break their land, and fence it, and put up buildings, and sometimes they are handicapped for want of time and money. We, therefore, show them some consideration.

Mr. MACINNES. But that is done in a regular manner, is it?

Mr. DRAKE. In a very regular manner. It is the practice of the Government with respect to authorizing the construction of small irrigation works, to fix a time limit of one year or two years, and at the expiration of that time we grant an extension for reasons, but unless we do grant extensions the works no longer are in good standing.

Mr. MACINNES. Reference was made in the earlier part of the proceedings to four joint gauging stations which have been established, one on the St. Mary River and three on the Milk River. I made certain statements to the Commission with regard to that, and I would like to hear from you as head of the irrigation department what is the history of the establishment of these stations in 1912.

Mr. DRAKE. Before 1912 the irrigation branch maintained a number of stream-measurement stations in the St. Mary River and Milk River watersheds and elsewhere throughout Canada, as part of the system for determining the quantities of water available for disposal under the irrigation act. We had a station on the St. Mary River a short distance north of the international boundary, and the United States Reclamation Service or the Geological Survey, I am not sure which, had a station just south of the international boundary. They were only separated by a few miles. Then we had stations which had been erected about 1908 or 1909 on both the south branch and the north branch of Milk River and another at the eastern crossing. I think the question of the establishment of joint stations came up in the form of a letter from the head of the United States Geological Survey, suggesting that these two stations then maintained on the St. Mary River be discontinued, and that one joint station be established, the records of which would be available to both countries. We agreed to do that and in turn suggested to the United States authorities the advisability of extending them to include the Milk River and its branches. They agreed with us and in turn went a little further and suggested that it would be a good

idea to establish similar stations on all international streams, that is as far as the matter has gone. It was agreed between us that these four stations should be erected at points mutually agreed upon, and that suitable gauges, approved by both Governments, should be established, and that the cost should be borne equally by the two Governments and the records should be available equally to both of them. We carried out that arrangement. We constructed the stations, shared the cost, and both Governments are operating them.

Mr. MACINNES. With reference to the schedules I mentioned that Mr. Peters was going to put in, I see that there are also some schedules of applications on the tributaries of the Milk River, as well as on the St. Mary River and the Milk River. What is the standing of the applications of the tributaries shown on the schedules?

Mr. DRAKE. The applications have been made in conformity with the provisions of the law, and the applications are in good standing.

Mr. WYVELL. Do you mean those that are east of the eastern crossing?

Mr. MACINNES. I was referring to the applications for water on tributaries of the Milk River in Canada.

Mr. TAWNEY. This forenoon I could not ascertain that there were any tributaries of the Milk River in Canada of any consequence.

Mr. MACINNES. Moving from west to east, there is first of all Lodge Creek, as it is known in Canada, and West Fork, as it is known in the United States; then there is Battle Creek, as it is known in Canada, or North Fork, as it is known in the United States; then there is Frenchman River and Whitewater Creek and Rock Creek.

These are the tributaries which flow in and join the Milk River below the boundary line, and it was stated in evidence to-day that the flow of these tributaries from Canada into the United States amounted in an average year to something like 190,000 acre-feet, or somewhere in the neighborhood of twice as much as the flow of the whole Milk River proper, as it leaves Canada at eastern crossing.

Mr. DRAKE. I may say that in addition to the recorded applications for water schedules, all of which are to be submitted, the Canadian Government has refused a good many applications for waters on these tributary streams, Frenchman River, Lodge Creek, and Battle Creek, because of the insufficiency of water and of the provisions of the waterways treaty.

Mr. TAWNEY. You stated a moment ago the aggregate of the applications on the St. Marys River, but I did not catch the aggregate number.

Mr. DRAKE. My statement referred only to the applications of the Alberta Railway & Irrigation Co.

Mr. TAWNEY. What is the aggregate of these applications?

Mr. DRAKE. It is a matter that is very difficult to compute. The applications call for the total low-water flow of St. Mary River and enough of the high-water flow to make it 2,000 second-feet.

Mr. TAWNEY. That application has been granted?

Mr. DRAKE. That application has been granted.

Mr. TAWNEY. When was it granted?

Mr. DRAKE. On the 3d of May, 1899.

Mr. TAWNEY. Subsequent to the making of this treaty in January?

Mr. DRAKE. No; in 1899, prior to the making of this treaty. In

addition to that there is the total flow of a number of small streams, and we have no very accurate knowledge of what that total flow amounts to, but that is not a considerable quantity of water—500 second-feet of water from the Belly River, 500 second-feet of the low-water flow of Milk River, and enough of the high-water flow to make it 1,500 second-feet. The grant from St. Mary River was authorized on the 3d of May, 1899; the other principal grants from Belly River and Milk River were made on the 23d of October, 1902.

Mr. TAWNEY. Belly River is not a tributary of the St. Mary River or of the Milk River?

Mr. DRAKE. No; it flows parallel to the St. Mary River.

Mr. MACINNES. The Belly River application is not appearing in the schedule Mr. Peters is putting in, because it has nothing to do with this matter.

Mr. DRAKE. Absolutely nothing to do with it.

Mr. SANDS. We object to the use of the word "grant" there because we think it carries a wrong impression. Mr. Drake used the term "grant" in 1899. It is only an application which is equivalent to a notice in our territory and the term "grant" ought not to be used.

Mr. DRAKE. Perhaps I may be permitted to explain that. I do not know that the word "grant" is the proper word, and yet it does seem to me to convey the idea. The applicant for water rights has rights from the day on which that application is first recognized by the Government and from the date that the applicant is authorized to construct his work. Granting authorization to a company or to an individual to construct irrigation works implies that the Government has satisfied itself that its plans are reasonable and that he can apply water to beneficial use, and it specifies the period of time within which he must complete his work. If he complies with that one condition and displays reasonable diligence in the construction of his work, his right exists. Our law recognizes his right as existing from the date on which authorization was given to him to construct his work.

Mr. TAWNEY. Have you any data showing the actual amount of water applied under these permits, as you call them, to the Alberta Railway & Irrigation Co.?

Mr. DRAKE. No, sir; I have not very accurate information. Mr. Burley gave evidence on that point this morning and he has a better knowledge of the facts than I have.

Mr. MACINNES. I think it would be better if we put in here with Mr. Drake's evidence a schedule of these applications. I had intended to put them in with Mr. Peters's evidence because it is all relating to the same subject matter.

Mr. TAWNEY. Do they show the amount of actual applications for water?

Mr. MACINNES. Yes. [To Mr. Drake:] Will you state what these schedules are?

Mr. DRAKE. There is a schedule showing all the water rights applied for by various parties on the St. Mary River and its tributaries in Canada.

(Schedule filed as Exhibit K.)

Mr. MACINNES. Up to what date is this schedule made?

Mr. DRAKE. This schedule is complete up to the 24th of December, 1914.

There is another schedule showing the water rights in the Milk River drainage basin up to the same date.

(Schedule filed as Exhibit K2.

A schedule showing the water rights in the Lodge Creek drainage basin filed as Exhibit K3.

A schedule showing the Battle Creek drainage basin filed as Exhibit K4.

A schedule showing the Frenchman River drainage basin filed as Exhibit K5.)

Mr. TAWNEY. Mr. Burley probably covered the question in acre-feet, but I would like to know this: The two Governments have recognized a prior appropriation of the water of these two rivers, 500 second-feet. Now, according to your testimony it would appear that there had been a prior appropriation at the time of the making of this treaty of something in the neighborhood of 3,000 second-feet. I want to know whether that number of second-feet of water has actually been applied to the irrigation of land in Canada, taken from these two rivers, prior to the making of this treaty?

Mr. DRAKE. No; it has not.

Mr. TAWNEY. Can you give us the number of cubic second-feet of water that was actually applied prior to January 11, 1909, the date of this treaty, or the date it was promulgated? I want to get out the actual appropriation of water at the time when the prior appropriation was recognized by both Governments of both countries to be fixed at 500 second-feet.

Mr. DRAKE. No, sir; I can not give you that information, and, so far as I am aware, it can not be obtained. The appropriators whose interests were to be protected in this case was a company which had very elaborate plans for the development of a very large district, and which required a very considerable period of time within which to develop its plans and to construct its works. As I said a moment ago, the company was granted 15 years from October, 1902, within which to construct its works, and under our law it was entitled to protection during the whole of that time, and it has also been granted permission to divert and use water through its uncompleted works at any period during construction, in order that it might develop the country as rapidly as possible. But the time has not yet arrived when it becomes the duty of the Government to determine just what the capacity of the canal system is and what are the lands that should be irrigated from it. That must be done before the license is given to the company, but the period for granting the license has not yet arrived, and therefore we have not done that.

Mr. MACINNES. You might explain to Mr. Tawney what was the capacity of the works of the A. R. & I. Co. on the St. Marys River and at the Milk River, respectively, at the date of the treaty.

Mr. DRAKE. At the date of the treaty, in 1910, I say, subject to correction, that the carrying capacity of the A. R. & I. Co. Canal in 1910 was about 800 second-feet. That would also apply to the year 1909. There are officers here who ought to be able to give that information more definitely than I can.

Mr. TAWNEY. Officers of the irrigation company?

Mr. DRAKE. No; our own officers.

Mr. MACINNES. And the Milk River?

Mr. DRAKE. The capacity of the Milk River Canal was, I believe, either 340 or 350 second-feet.

Mr. MACINNES. Reference has been made about the water running into the Milk River Canal; what information can you give us as to that?

Mr. DRAKE. Such information as I have on that point is, of course, from hearsay. I did not see the water running.

Mr. MACINNES. Do you know it from your official knowledge?

Mr. DRAKE. I know officially that water was run through that canal in one year—that it was carried over the divide. That was a point that was questioned this morning—that it was carried over the divide to the end of the canal.

Mr. MACINNES. How far over the divide?

Mr. DRAKE. I think approximately 20 miles from the point of intake.

Mr. BIEN. Do you know how much there was?

Mr. DRAKE. I do not know whether the canal was run to its full capacity or not, or whether there was sufficient water in the river at the time.

As part of Exhibit K, part K6, I file a brief record of the application for water submitted by Messrs. F. W. Elmore and N. D. MacIntosh, of Grand Forks, British Columbia, who wanted to irrigate a tract of land in the Frenchman Valley, comprising 20,960 acres, of which they claimed that 15,167 acres could be irrigated. The Canadian Government declined to sell the land and declined to grant a water right on the ground of insufficiency of water in that stream for that purpose. That was in April, 1910. I have here also a plan showing the tract of land which these gentlemen purposed irrigating. (Plan filed as part of Exhibit K6.)

Mr. MACINNES. On the first page of this Exhibit K6 the letters "H" and "F" are used under the word "low." What do "H" and "F" stand for?

Mr. DRAKE. High water and floods.

Mr. GLENN. Are these applications in good standing?

Mr. DRAKE. They are all applications in good standing.

Mr. GLENN. And you are putting in now an application which has been refused.

Mr. MACINNES. Would you state, Mr. Drake, why it was refused?

Mr. DRAKE. I stated that the Government had refused to grant some water rights that had been applied for, because of the insufficiency of the water supply, and this is evidence of that fact.

Mr. CONNER. Mr. MacInnes made the statement that the flow across the boundary of the tributaries east of the eastern crossing of the Milk River was 190,000 acre-feet, or practically twice that of the eastern crossing of the Milk River. I do not like to have that statement go in without it being more closely verified. I think the figures would be very close to 125,000 acre-feet for Battle Creek, Lodge Creek, Whitewater, and Rock Creek, as against 105,000 at the boundary line, of which about 90,000 rises in the United States territory.

Mr. MACINNES. The figures which I stated were those given to me by our engineer.

Mr. CONNER. That might be the total run-out at the lower gauging station—at the point of crossing the boundary; I think that is an error.

Mr. MACINNES. I am informed the figures are taken at existing stations which are approximately at the boundary.

Mr. CONNER. I should like to have that looked into.

Mr. WYVELL. With regard to the statement from which he read, if Mr. MacInnes is to call any more witnesses we might reserve the privilege of looking it over and possibly asking a few questions in the morning. Mr. Drake, did you have any personal conversation with anyone in the Reclamation Service or the Geological Survey with regard to the establishment of the four joint measurement stations?

Mr. DRAKE. No.

Mr. WYVELL. What you have said, then, is derived from the official records and from what you have heard others say, I suppose?

Mr. DRAKE. Entirely from the official records.

Mr. WYVELL. Have you got those official records here and the correspondence that passed?

Mr. DRAKE. I think so. I am not absolutely sure, but I think we have.

Mr. WYVELL. I wonder if I could have the privilege of looking at them before we leave St. Paul?

Mr. DRAKE. Certainly. I may say that I think the original letter was from Mr. Walcott, and subsequently there was some correspondence with Mr. Lamb, the Geological Survey representative.

Mr. WYVELL. The unfortunate part of it is that our man, Mr. Grover, who was with the Geological Survey, has been there but a short time, and we have not got that correspondence here with us. We thought we might like to see it. Mr. Drake, did you take any records of the actual amount of water that passed through your canal prior to 1910?

Mr. DRAKE. Through the A. R. & I Co.'s canal?

Mr. WYVELL. Yes; prior to 1910.

Mr. DRAKE. I can not say of my own knowledge, but the facts are all there in the reports of stream measurements, and I believe that that very point was referred to this morning.

Mr. WYVELL. You have no desire to make any change from the testimony of Mr. Burley, have you?

Mr. DRAKE. None whatever. Mr. Burley has a more detailed knowledge of the physical facts than I have.

Mr. WYVELL. I wanted to get into the record in some way or other the maximum amount that your canal had carried in any given year, in addition to the records that we had in before.

Mr. DRAKE. If you wish to have that placed in the record, Mr. Wyvell, I am satisfied that in one of the later reports there is a statement showing the maximum quantity of water that was carried through that canal as shown by a gauge rod at the point of intake.

Mr. WYVELL. That is already in evidence?

Mr. DRAKE. It is, but I will look it up and show it to you.

Mr. WYVELL. Can you look it up quickly now?

Mr. DRAKE. I do not believe I can.

Mr. WYVELL. Never mind, then; we will put it in later. I wish one of your men would look up the amount of flow through the canal in the year 1914, which has not been published, and the maximum amount that the canal of the irrigation company carried during that year.

Mr. SANDS. You say, Mr. Drake, that the laws of Canada provide for cancellation of this application for nonuse?

Mr. DRAKE. Yes.

Mr. SANDS. Upon what evidence or conditions is that application canceled?

Mr. DRAKE. Upon the evidence of officers of the Department of the Interior.

Mr. SANDS. To what effect?

Mr. DRAKE. To the effect that the works have been abandoned or that they have not been used for a definite period of time, and that no reasonable excuse for such nonuse has been given.

Mr. SANDS. Is that a fixed period or a variable period?

Mr. DRAKE. A variable period.

Mr. SANDS. You use the word "canceled." You assume that the right has previously existed?

Mr. DRAKE. Yes.

Mr. SANDS. In the use of the term "grant," you say that the right has been granted?

Mr. DRAKE. Yes.

Mr. SANDS. Is it a right to water or a right to acquire the use of water?

Mr. DRAKE. It is a right to acquire a right to use water. I think that would be explicit.

Mr. SANDS. Then the term is not complete. When you say "granted" it is not a complete granted right.

Mr. DRAKE. Subject only to fulfillment by the applicant of certain conditions which he wholly controls.

Mr. SANDS. In other words, it is a conditional right?

Mr. DRAKE. Yes.

Mr. SANDS. Do you know of any specific instance in which the right was canceled for nonuse; and if so, what was the approximate time that the Government saw fit to cancel?

Mr. DRAKE. I can not give you a definite answer to that question. I know of a great many cases in which applications for water rights, or actual grants of the right to use water, have been canceled for nonuse, but I can not at the moment recall a particular case so as to give you the length of time that elapsed between the last use of the works and the date of cancellation.

Mr. SANDS. Would it be three or four years, or such a matter?

Mr. DRAKE. It might be.

Mr. SANDS. It might be less?

Mr. DRAKE. It might be less, even. The matter is in the discretion of the minister of the interior acting upon the advice of his subordinates.

Mr. SANDS. In speaking of the Milk River Canal in Canada you say you did not see the water flow there yourself?

Mr. DRAKE. No; I did not see it.

Mr. SANDS. Did you see any evidence of its flowing there? Did you make any examination?

Mr. DRAKE. As a matter of fact, I have never seen the intake of that canal.

Mr. SANDS. Did you see the canal at any time shortly after it carried this water?

Mr. DRAKE. No.

Mr. SANDS. And you speak wholly from hearsay with regard to the matter?

Mr. DRAKE. From that, and from evidence available on the official files of the department.

Mr. SANDS. Was that evidence simply for the purpose of acquiring the right or showing that it could be run through the ditch, or was it for the purpose of making a beneficial use of the water?

Mr. DRAKE. I do not think I quite got the first part of your question.

Mr. SANDS. When the water was run through that ditch, was it run through there for the purpose of demonstrating that it could be run through the ditch, or for the purpose of using it beneficially upon the land?

Mr. DRAKE. I think when the water was first put through the ditch it was run through for the purpose of showing that the ditch had been properly constructed and would carry water. I do not know whether any water was ever run through it for the purpose of actually applying it to beneficial use upon any particular tract of land.

Mr. SANDS. Have you anyone here who would know the facts in that case.

Mr. DRAKE. I think perhaps Mr. Peters might know that.

Mr. MAGRATH. The water was run through the canal for the purpose of testing it, Mr. Sands. It was not applied to any beneficial use.

Mr. SANDS. Mr. Drake, are there any rights from either Milk River or St. Mary River that had actually been completed and granted, if I may use the term?

Mr. DRAKE. Yes. There are some, and they are shown in those schedules.

STATEMENT OF J. S. DENNIS, ASSISTANT TO THE PRESIDENT OF THE CANADIAN PACIFIC RAILWAY CO.

Mr. MACINNES. Mr. Dennis, I understand that you are assistant to the president of the Canadian Pacific Railway Co.

Mr. DENNIS. Yes.

Mr. MACINNES. You are also the head of one of the departments of that railway?

Mr. DENNIS. Yes.

Mr. MACINNES. What is the official designation of that?

Mr. DENNIS. The department of natural resources.

Mr. MACINNES. What knowledge have you of the works, operations, and undertakings of the Alberta Railway & Irrigation Co.?

Mr. DENNIS. The irrigation system of the Alberta Railway & Irrigation Co. is now owned by the Canadian Pacific Railway Co. and is operated in connection with other irrigation projects under the

department of natural resources, of which I am the head. I have some personal knowledge of that system, because I made the first surveys for it. I have been over it frequently since during its period of construction and operation, and have had to deal with any matters of appropriation for its extension or betterment, operation, and maintenance.

Mr. MACINNES. Will you state to the commission in your own language the value of water for irrigation purposes to Canada in this district?

Mr. DENNIS. When the preliminary surveys for that canal system were made——

Mr. MAGRATH. By whom, Mr. Dennis?

Mr. DENNIS. By myself.

Mr. MAGRATH. Not for the Canadian Pacific Railway Co. though.

Mr. DENNIS. No. At that time I was an official of the Dominion Government administering the irrigation act. Preliminary surveys were made in that district in 1894 to indicate the possibility of getting water from the St. Mary River out onto a large area of land south and east of Lethbridge, because it was felt that without water which could be applied to the land through the principle of irrigation there was little or no possibility of colonizing that area. At that time the department of the interior was carrying on a series of general surveys throughout southern Alberta, or as it then was a portion of the Northwest Territories, to indicate what the available water supply was for irrigation and where it could be used. This was one of the canals that was located as a result of those preliminary surveys. The construction of the canal was subsequently taken up by the Alberta Railway & Irrigation Co. and carried to completion. Subsequently, and within comparatively recent time, the railway lines and the coal mines and this irrigation project belonging to the Alberta Railway & Irrigation Co. were all acquired by the Canadian Pacific Railway Co.

Mr. WYVELL. Is the year that they were acquired in the record?

Mr. DENNIS. Yes; it is in the record. It was in 1911. Since that date the actual administration of this system has been under the irrigation branch of the department of natural resources, of which I am the head. The primary object was to get the water from the available source out onto the land to permit of that district being colonized. That was the primary object that the Government had in making the preliminary surveys, and was no doubt the object that the Alberta Railway & Irrigation Co. had in constructing the system. It is the object that we now have in view in maintaining and operating the system and in possibly extending it—colonization.

Mr. MACINNES. Is there any other point on which you have information which you think would be of assistance to the commission, Mr. Dennis, from your previous and present knowledge of the matter?

Mr. DENNIS. In that particular district?

Mr. MACINNES. I mean in the district which can be irrigated from the waters of either of these rivers or their tributaries?

Mr. DENNIS. In that portion of southern Alberta the same condition exists as exists in many other portions of the semiarid west. There is, of course, a very much larger area of land suitable for colonization and cultivation if there was an available water supply

to irrigate it. The extension of irrigation in that portion of Alberta is limited by the available water supply. We have under contemplation at the present time an extension of the A. R. & I. system, as it is called, for taking water from the St. Mary River to irrigate an additional 18,000 acres of land in a district called the Taber district, which lies to the east of the area served by the present canal system. That district has been supplied for many years by farmers who took up their land as homesteaders, but after a series of years of effort they have not had very much success in raising crops by dry farming, and passing backward and forward to Lethbridge through the irrigated district they see large areas of alfalfa and other successful crops, and have desired to have the A. R. & I. system extended to irrigate their district. They petitioned us to extend it, and we have been considering the matter of providing that extension. The difficulty that arose was that we had at the time no provincial enactment under which these people could constitute themselves a district or municipality, so that they could issue bonds to pay for the system or charge all the farms with the cost, but that difficulty was overcome at the session of our provincial legislature this spring, when an irrigation district act was passed. Under the provisions of that act these people have now petitioned to be organized into a district, and are asking us to extend the A. R. & I. system to supply this 18,000 acres within their district. We are disposed to do so, providing there is no question of there being water available. That is a matter that is at present being looked into by our engineering force in conjunction with the engineering force of the department of the interior.

There are other large districts south of there, also lying to the east of the district which is served by the A. R. & I. system, that are very suitable for colonization, provided there was water available for irrigation. The only way of obtaining water for those districts is from the St. Mary River, the Milk River, or from the tributaries of the St. Mary River to the west, or the Belly River. The question of providing an additional supply from the Belly River has been given some consideration by the Government, and has, I think, been already referred to in the evidence given here. That portion of southern Alberta is in much the same shape from the standpoint of the climate or soil that the lower Milk River Valley is in Montana, and its ultimate development, intensive development, will be very largely dependent upon what amount of water can be supplied for irrigation of the land. The matter of the supply of water from the Milk River to this district served by the A. R. & I. Canal from the St. Mary River was dealt with at the time that I was also a Government official and administering the northwest irrigation act, and that canal was originally located, not by me personally, but by engineers working under my instructions, for the purpose of proving that it was possible to divert water from the Milk River on the south side of the Milk River ridge and bring it around the eastern end of that ridge and serve the portion of the same area of country that is served by the A. R. & I. Canal from the St. Mary River. It was done with the designed purpose of diverting from the Milk River the water put into the Milk River from the St. Mary River, which would be taken away from our headgate on the St. Mary River.

It was at that time contemplated that the reclamation project on the south side of the line intended to divert the water of the St. Mary River and deprive our canal of the water right that it had in the St. Mary River and carry this water through the Milk River down to the lower Milk River project. It had been stated, I think I am correct in saying, in some of the reports of the Reclamation Bureau, that the water put into the Milk River could not be taken out on the Canadian side. We were naturally anxious to prove whether that was so or not, and we sent some of our engineers there to look the situation over. We finally located a canal to take the water out of the Milk River and bring it around the east end of the ridge and put it into a part of the same area that was served by the St. Mary coming around the west end of the ridge. The surveys indicated that the canal could be built, and the Alberta Railway & Irrigation Co. took the matter up and built the canal and ran the water from the Milk River over the divide and proved that water put into the Milk River from the St. Mary River could be diverted on the Canadian side of the line. That was the purpose of the construction of that canal, and I think I was personally responsible for suggesting that it should be located and constructed.

Mr. MACINNES. Then water diverted in that way could be put into reservoirs and taken from there on to the St. Mary River land?

Mr. DENNIS. Yes.

Mr. MACINNES. So that that possibility can be considered in any division and apportionment of the waters that the commission may make?

Mr. DENNIS. Certainly. We are prepared to put the Milk River canal in service at any time. It will require some slight expenditure to put it in shape to carry water at the head gates and one or two washouts along its location, but a comparatively slight expenditure would put the Milk River canal in a shape to-day to carry water over the height of land.

Mr. GARDNER. What was the capacity of that canal, approximately?

Mr. DENNIS. I am not positive as to what its carrying capacity was.

Mr. MACINNES. The previous evidence was that it was 350 second-feet.

Mr. DENNIS. It was about 300 second-feet.

Mr. MACINNES. That canal on Milk River could, therefore, take up to its capacity any portion of the water of the Milk River or of the St. Mary River which was allowed to flow past it.

Mr. DENNIS. Yes; by some expenditure to put it in good shape.

STATEMENT OF F. H. PETERS, COMMISSIONER OF IRRIGATION, DOMINION OF CANADA, CALGARY, CANADA.

Mr. MACINNES. Mr. Peters, will you state your official position and how long you have held that position, and also your knowledge of the matter now before this commission?

Mr. PETERS. My position is that of commissioner of irrigation and chief engineer for the irrigation branch of the department of the interior. I have held that position since the spring of 1911. My connection with this matter commenced in the spring of 1909, when

I was employed in the Milk River Valley in Canada making hydrographic surveys and in the summer of the following year, 1910, making a report to the Canadian Government on the treaty which was then contemplated.

Mr. MACINNES. You are a civil engineer by profession?

Mr. PETERS. Yes.

Mr. MACINNES. I understand that you have material to submit to the commission as to the irrigable areas in Canada, together with a map, a summary, and an explanation.

Mr. PETERS. This is a statement with reference to the areas of land which can be irrigated from the St. Mary and Milk Rivers in Canada.

A number of private canals have been constructed in Canada diverting water from both the St. Mary River and Milk River, but one of the largest areas which can be watered from the St. Mary system is the block of land lying under the Alberta Railway & Irrigation Co.'s canal system and comprising some 242,000 acres, of which about 156,600 can be watered from the works already constructed. In addition to this area there are 37,000 acres, of which 17,000 are irrigable in the tract under the Taber extension, which has been contoured, and through which canals and structures have been located with a view to early construction by the company, making a total of almost 174,000 acres of irrigable land under the present system.

I would like to explain in this connection just how the irrigable areas have been determined. In connection with the 156,600 acres under the Alberta Railway & Irrigation Co.'s canals, these works have been constructed and the lands for which they are constructed to irrigate are peculiarly smooth on the surface, and the canals are in existence, so that this figure of 156,600 is a very definite figure. The lands have also been leveled over, so that there is no question about where the water can be run. As regards the further area of 17,000 acres under the Taber extension, this land has had canals located to it and through it, and the land has all been very carefully contoured under as close methods as are ever used to determine actual irrigable acreages in sections of land, so that this area of 17,000 acres is also defined absolutely and very accurately.

This land lies in a district with elevations ranging from 3,600 to 2,500 feet above sea level and is for the most part of such a nature as to give favorable results under irrigation. The climatic conditions are favorable for the use of water, and the growing season is long enough to insure the maturing of most cereals, sugar beets, and garden stuff, while it has been demonstrated that three cuttings of alfalfa can be secured per season. The rainfall is comparatively light, the average at Lethbridge for 12 years being 16 inches, while in years of minimum precipitation very light yields are the rule where irrigation is not practiced.

A further large area of irrigable land lies in the Blood Indian Reserve, but unfortunately no detailed surveys are available to show what area can be watered from the St. Mary and Belly Rivers. An estimate made by the Dominion Government in 1914 shows that some 87,000 acres of land can be irrigated within the boundary of the Indian Reserve.

With reference to this area of 87,000 acres of irrigable land I would state that the land has not all been leveled over, but sufficient preliminary levels have been run to show where the water can be taken out of the St. Mary River, and Government township maps delineate the high areas—that is, where there are hills—and we have been able in this way to estimate the area of land that could be commanded by the canal; that is, over which the water could be run. Then, in order to get this definite area of irrigable land, the net irrigable land, we have taken 40 per cent of this commanded area, and this gives us this net irrigable area of 87,000 acres. I would state also—and this refers to figures which will be quoted later—that in using this figure to show what portion of the commanded area the net irrigable area would be it was a matter of judgment by our field engineers, and, in order to make sure that their judgment was a good judgment, we took similar areas that have been developed under the large Canadian Pacific Railway tracts in their western and eastern sections and the tract on the Southern Alberta Land Co., where we have similar country and have canals located showing the commanded acreage, and later than this land has all been carefully contoured showing absolutely definitely the net irrigable acreage. The result of these studies has been to show that the percentage under these schemes of net irrigable land to commanded land is 40 per cent. I am quoting this to show that, in so far as our judgment is concerned, we feel that the estimate of net irrigable area is a very conservative one.

Mr. MACINNES. Mr. Peters, have you got your map there to place before the commission while you are making your statement?

(The map referred to was thereupon presented to the commission and explained by Mr. Peters.)

Mr. TAWNEY. Are the tracts 2 and 3 which you have indicated on the map as containing 150,000 acres in the aggregate under irrigation at the present time?

Mr. PETERS. Yes.

Mr. TAWNEY. I understood you to say that only about one-half were under irrigation.

Mr. PETERS. About one-half is being actually irrigated.

Mr. TAWNEY. About 75,000 acres are now actually irrigated by the water from the St. Mary River?

Mr. PETERS. Yes.

Mr. TAWNEY. That consumes how much water? Can you give us any idea of the acre-feet or cubic feet per second?

Mr. PETERS. It would consume about 2 acre-feet per acre.

Mr. POWELL. That is 150,000 acre-feet?

Mr. PETERS. Yes.

Mr. WYVELL. You have never let 150,000 acre-feet through your canal, have you, in recent years?

Mr. MACINNES. There were 170,500 acre-feet last year.

Mr. TAWNEY. This would be an average of about 500 second-feet, I understand you to say?

Mr. PETERS. It is nearer 600 second-feet for the five months of 1914, the irrigation season.

Mr. MACINNES. You might now proceed with your statement, Mr. Peters.

Mr. PETERS. To the eastward of the tract at present served by the Alberta Railway & Irrigation Co.'s system lies a large area of land well adapted to irrigation ranging in elevation from 3,100 feet to 2,500 feet above sea level and having an even smaller average precipitation than the lands around Lethbridge. Surveys conducted during the season of 1914 have demonstrated it to be practicable to irrigate at a reasonable cost some 364,000 acres of this area, while over 1,000,000 acres will be commanded by the canals, as projected.

With reference to those 364,000 acres of irrigable land, I would state that surveys have been conducted and levels have been run over the whole of this tract.

Mr. MACINNES. That is identified on the map as east of Lethbridge.

Mr. POWELL. We should have this map marked in some way.

(The map was thereupon marked "Exhibit L," and the smaller map accompanying it "Exhibit L1.")

Mr. TAWNEY. The land that you were speaking of, Mr. Peters, is the larger tract lying due east of tracts 2 and 3 and located in the vicinity of Lethbridge. The tract that you are now speaking of comprises tracts 4 and 5 lying due east of tracts 2 and 3 in the vicinity of Lethbridge.

Mr. PETERS. This tract of 364,000 acres refers to tracts 5, 6, 7, and 8 as shown on Exhibit L. With respect to this area, surveys have been executed over all of it and levels have been run over all of the land which has allowed us to make a complete contour plan with contours at intervals of 25 feet, vertical intervals. In addition to this, the main supply canals have been located on the ground, and this has allowed us to measure accurately the areas of land that can be commanded by the water. This has allowed us to take out all the high areas which can not be commanded by the water. Then our field engineers have gone into this area of land township by township and made an estimation of the percentage that should be taken of the commanded area to get the net irrigable area, and I would call attention to the fact that this is shown to be about 36 per cent, which, from the study that I previously gave as evidence, we think shows that this estimation is a very conservative one.

Mr. TAWNEY. Thirty-six per cent is the net area of irrigable land?

Mr. PETERS. Yes.

Mr. MIGNAULT. You have ascertained that the percentage of land that could be actually irrigated would be 36?

Mr. PETERS. Yes; that is the net irrigable land; 36 per cent of the commanded area of land.

Mr. GLENN. Is that on both sides, or on the Canadian side only?

Mr. PETERS. This refers particularly to the surveys that we have made. I am trying to indicate the degree of accuracy that we went to in finding out what these areas are so that there can be no question about this. I simply want to give you the information that will show that these areas are accurate areas.

Above the present canal at a point below where it enters Pinepound Creek there is an area of about 33,300 acres, of which 14,700 acres are irrigable and can be watered from the high-level canals located during the season of 1914.

Mr. POWELL. What number is that tract on the map?

Mr. PETERS. This refers to tract No. 1 on Exhibit L. I would say with reference to this tract that the irrigable land was determined in the same way as for the other tracts of land under the Government surveys.

One point should be noted, and that is that the greater part of these lands is irrigable from either the St. Mary or the Milk River, through the canal systems constructed or located.

The appended schedule gives a synopsis of the irrigable lands lying under present canal systems and possible extensions.

The private schemes in the St. Mary Basin in Montana are negligible, so far as is known, but on the Canadian side there are several, in addition to those of the Alberta Railway & Irrigation Co.

The first important diversion from Milk River is in township 2, range 17, west of the fourth meridian, where the Alberta Railway & Irrigation Co.'s old works still are. At present they are in poor shape and have not been used for a number of years, but a comparatively small expenditure would put them in order, when they could be used for the irrigation of lands lying to the north and east of the Milk River Ridge. In fact, practically all the lands irrigable from the St. Mary Canal can be watered from this system.

North of the boundary there are some 26 schemes on Battle Creek irrigating 9,359 acres, 25 on Lodge Creek irrigating 7,453 acres, and 40 on Frenchman River irrigating 11,594 acres, all in good standing and constructing their works with due diligence. In addition to these there are some 31 schemes, comprising over 3,000 acres of irrigable land at present held in abeyance pending a settlement of the treaty conditions, and three applications for large systems have been refused on the same account.

The following tables give a conservative estimate of the irrigable areas along these tributaries in Canada, including the lands already under private schemes, which could be watered at a low cost per acre:

Irrigable areas.

| Frenchman River watershed: | | Acres. |
|--|-------|---------|
| Already irrigated | ----- | 11, 594 |
| Sixty-mile flat | ----- | 8, 000 |
| Valley between Sixty-mile and Seventy-mile flats | ----- | 4, 000 |
| Seventy-mile flat | ----- | 7, 000 |
| Seventy-mile flat to boundary | ----- | 5, 000 |
| Total | ----- | 35, 594 |
| Battle Creek watershed: | | |
| Already irrigated | ----- | 9, 359 |
| Undeveloped | ----- | 8, 000 |
| Total | ----- | 17, 359 |
| Lodge Creek watershed: | | |
| Already irrigated | ----- | 7, 433 |
| Undeveloped | ----- | 8, 000 |
| Total | ----- | 15, 433 |

A much larger area from Battle and Lodge Creeks can be watered by building systems to cover the bench lands lying in the townships immediately north of the boundary, but these have not

been included because it is considered that there is not enough water available to justify the large expenditures necessary to construct adequate works, and only the easily irrigated lands are, therefore, estimated on.

I would note that of the 19,000 acres stated as irrigated in the Frenchman River there are included in this a tract of 13,157 irrigable acres which is shown on the application of Elmore & McIntosh, put in by Mr. Drake.

Mr. GLENN. That has not been acted upon?

Mr. PETERS. No, sir.

Mr. MACINNES. Why was that not acted upon, Mr. Peters? Can you tell us in answer to Mr. Glenn's question?

Mr. GLENN. That is in evidence. It was on account of the treaty. I just wanted to know whether that was the same tract that he was referring to.

Mr. TAWNEY. Before you leave that point, Mr. Peters, I would like to ask how much water is available for irrigation purposes in the Lodge Creek watershed, the Battle Creek watershed, and the Frenchman River watershed in Canada? How much water in Canada in these watersheds is available for irrigating lands in Canada?

Mr. PETERS. I could only refer to our records of stream measurements to answer that question.

Mr. TAWNEY. You have not that data?

Mr. PETERS. I have not it in my head.

Mr. TAWNEY. I wish you would put it in your statement here for the sake of the record.

Mr. MACINNES. I think Mr. Burley can answer that question now.

Mr. TAWNEY. I want to know, Mr. Burley, the amount of water available for irrigation in Canada in the watersheds of Lodge Creek, Battle Creek, and Frenchman River.

Mr. BURLEY. I can give you our estimate, Mr. Tawney.

Mr. TAWNEY. That is all I want.

Mr. BURLEY. On the Lodge Creek we estimate a mean annual flow of 39,300 acre feet.

Mr. WYVELL. Is that past the boundary?

Mr. BURLEY. That is up to the boundary line; that is on Canadian territory. On Battle Creek, 47,300 acre-feet; on Frenchman River, 76,600 acre-feet; on Whitewater Creek, 8,400 acre-feet; and on Rock Creek, 19,000 acre-feet; the total of those figures being 190,600 acre-feet.

Mr. TAWNEY. Where are Whitewater Creek and Rock Creek?

Mr. PETERS. Just west of the Frenchman River.

Mr. TAWNEY. The estimate which you gave for Whitewater and Rock Creeks are above the boundary in Canada?

Mr. BURLEY. Yes, sir.

Mr. MACINNES. You will observe that the total of those figures amount to something over 190,000 acre-feet, which is in accordance with the statements that I have made to the commission earlier.

Mr. WYVELL. For the sake of the record, I would like to say that I am not certain that our men have agreed to these figures.

Mr. TAWNEY. I understand that. This is their estimate. It is not an agreed statement.

Mr. MACINNES. Mr. Burley frankly stated that.

Mr. POWEEL. If you are a few thousand acres out, gentlemen, it is not going to affect this question very seriously one way or the other.

Mr. TAWNEY. Mr. Peters, can you give a summary of the water available in St. Mary and Milk Rivers and their tributary watersheds, just as you have given the summary there of the acres that are irrigable land?

Mr. MACINNES. I will have that put in for you.

Mr. PETERS. Our estimate of the average flow of the St. Mary River at the boundary is 735,000 acre-feet.

Mr. TAWNEY. That is water that is available for irrigating all the lands that you have mentioned in the summary on the St. Mary watershed, is it?

Mr. PETERS. Yes, sir. It is the total flow of the river at the boundary. If some of it is taken out by the United States canal, it would not be available by our canal.

Mr. TAWNEY. I mean in a state of nature.

Mr. MIGNAULT. Is that an average annual flow?

Mr. PETERS. Yes, sir.

Mr. MIGNAULT. The average covers how many years?

Mr. PETERS. From about 1902. The water supply available at the intake of the A. R. & I. Canal on the Milk River in Canada—

Mr. MACINNES. While you are discussing St. Mary River, tell the chairman the amount available at the intake of the A. R. & I. Canal at St. Mary. I understood it to be approximately the same as at the boundary. Tell the chairman how far the intake of the A. R. & I. Co.'s canal is above this boundary.

Mr. PETERS. I would say that between the boundary and the intake of the A. R. & I. Co.'s canal the accretion to the flow is very, very small; for all practical purposes it is negligible.

Mr. MIGNAULT. Are there any tributaries between the two points, Mr. Peters?

Mr. PETERS. No, sir; not of any consequence.

Mr. TAWNEY. The tributaries to the St. Mary above Kimball and the mouth of the St. Mary contribute how much to the waters of the St. Mary available for irrigating tracts Nos. 2 and 3?

Mr. PETERS. At the present time we do not consider any diversion from the St. Mary River.

Mr. TAWNEY. I means how much, if any, water is contributed to the St. Mary River between Kimball and the mouth of the St. Mary River in Canada which could be used for irrigation. That is, in addition to the water at the boundary and Kimball.

Mr. PETERS. The accretion to the flow is about 72,000 acre-feet from Kimball to the mouth of the river. The bulk of it, I think, could be used for irrigation.

Mr. TAWNEY. The flow of the St. Mary River between the boundary and Kimball, which is at the intake, you say is how many acre-feet?

Mr. PETERS. I say it is practically negligible between the boundary and Kimball.

Mr. TAWNEY. That is the accretion, but what is the actual flow?

Mr. PETERS. 735,000 acre-feet.

Mr. TAWNEY. So there is no appreciable accretion between that flow at the boundary and Kimball at the point of the intake?

Mr. PETERS. No, sir.

Mr. TAWNEY. What is the accretion between Kimball and the mouth of the St. Mary River that would be available for irrigation purposes?

Mr. PETERS. The accretion is 72,000 acre-feet, but I am not prepared to say that it is available for irrigation. It is in the river, but it may not be possible to take it out of the river and place it on the land, because the river is cut down very deep in the prairie from below Kimball.

Mr. TAWNEY. Now give us a similar summary for the watersheds of the Milk River of the water available in these several watersheds that you have mentioned for irrigation purposes.

Mr. PETERS. The average annual flow of the Milk River at the A. R. & I. Co. intake is about 104,000 acre-feet. The average annual flow of the Milk River at the eastern crossing, I would state, is between 120,000 and 140,000 acre-feet.

Mr. TAWNEY. Now, what is the water available in the Lodge Creek watershed?

Mr. PETERS. Approximately 39,000 acre-feet.

Mr. TAWNEY. What is the amount available in the Battle Creek watershed?

Mr. PETERS. Approximately 47,000 acre-feet.

Mr. TAWNEY. And the Frenchman River watershed?

Mr. PETERS. Approximately 76,000 acre-feet.

Mr. TAWNEY. And in the two other streams that you have mentioned—Whitewater and Rock Creeks?

Mr. PETERS. Whitewater, approximately 8,000; Rock Creek, approximately 19,000; and on these tributaries these measurements are with reference to their respective crossings of the boundary.

Mr. TAWNEY. Could you sum that up and give us the total, to be put in the record for the information of the commission?

Mr. PETERS. I can not summarize it any more than it is in this record, except to give you the total.

Mr. TAWNEY. That is what I want, the total in St. Mary and the total in the Milk River.

Mr. PETERS. Together or separately?

Mr. TAWNEY. Separately.

Mr. PETERS. The totals for the St. Mary are 735,000 at Kimball. The total at the mouth would be 807,000 acre-feet. The total of the flow of the Milk River at its eastern crossing, plus the flow of the northern tributaries at their respective crossings, is from 310,000 acre-feet to 330,000 acre-feet. In giving the flow of the Milk River I gave it as from 120,000 to 140,000 acre-feet.

Mr. POWELL. Now, see if we can not get the data complete. Can you give us the measurements of the several streams to the south at their confluence with the southern bank of the Milk River?

Mr. PETERS. I can give you our estimate of certain of them.

Mr. POWELL. That information is not complete?

Mr. PETERS. No, sir.

Mr. POWELL. Can you give us the flow of the Milk River at the different confluences of these northern tributaries on the Milk River?

Mr. PETERS. I can give you the flow of the Milk River at the gaging stations at Havre, Hinsdale, and Malta.

Mr. SANDS. That is all in the record.

Mr. MACINNES. I do not think it is.

Mr. SANDS. The irrigation papers were put in the record.

Mr. PETERS. The total average flow of the Milk River at Havre, Mont., is 210,000 acre-feet. The total average flow of the Milk River at Hinsdale, in Montana, is 622,000 acre-feet.

Mr. POWELL. Those are all you have?

Mr. PETERS. Those are all that I have at hand.

Mr. MACINNES. You had the accretion to the flow between Hinsdale and Vandalia and the mouth of the river.

Mr. PETERS. Between Hinsdale and the mouth our estimate of the accretion to the flow is 72,000 acre-feet.

Mr. MACINNES. What is the total flow for the Milk River?

Mr. PETERS. The total flow of the Milk River at its mouth is 704,000 acre-feet.

Mr. MACINNES. Does that include the average amount diverted, of which, of course, you would not have a record—the average amount diverted in the United States from the Milk River above Hinsdale or Vandalia, which is said to be the last point of diversion?

Mr. PETERS. No, sir; I believe that is simply the natural flow of the stream as measured, and to get the total, if certain waters had not been diverted by canals, a certain amount should be added to that.

Mr. MACINNES. In the case of the St. Mary River it was a gross amount, including everything? There were no diversions in the figures that you gave us as to St. Mary? It was the natural flow?

Mr. PETERS. Yes, sir.

Mr. MACINNES. As to the Milk, that is not the case. It is the figures less certain diversions?

Mr. PETERS. Yes, sir.

Mr. BIEN. Mr. Peters, your discharge for the St. Mary River at its mouth, does that include or exclude the diversions of the St. Mary Canal in Canada? That is, do you make allowance for any diversions of the A. R. & I. Co. canal?

Mr. PETERS. Yes.

Mr. BIEN. Then that has been added to the total measured? What I mean is, if you measure the St. Mary at its mouth you will not include any diversions of the A. R. & I. Co.?

Mr. PETERS. No; but if my recollection is correct the figure that I gave is the total natural flow, making allowance for the diversion of the A. R. & I. Co.

Mr. MACINNES. But is it all Milk River water?

Mr. PETERS. Well, he was speaking of the St. Mary for the moment.

Mr. POWELL. You foreshadow two contentions, one of which will be put forward by one side and one by the other. The contention is that you should simply take into consideration the waters that pass the boundary line; secondly, that you should take in all the waters that are known as the Milk River and the tributaries of the Milk River and the St. Mary River and the tributaries of the St. Mary River. We have all the data with respect to the former; we have not complete data with respect to the latter; is that going to be supplied?

Mr. WYVELL. As I understand it, we are here to present such data as we have. Such data as we have not presented will be presented, I would suggest, by our engineer, Mr. Stevens, in tabulated form.

Mr. GLENN. How about your contention yesterday that any water south of the boundary, that did not go into Canada at all, ought not be counted?

Mr. WYVELL. That is the opinion of the United States Government, of course.

Mr. GLENN. Mr. MacInnes takes the other position, I understand.

Mr. WYVELL. I have not heard him state anything officially.

Mr. GLENN. Then we have the contention of one side and not of the other.

Mr. MIGNAULT. We are not concerned so much now with your contention; we want the facts, and it seems to me it would be extremely simple to give us the facts.

Mr. WYVELL. The engineers are naturally interested in the accuracy and permanency of their records, and they do not like to submit in an official report records which they could not stand behind; and, in justice to our engineers, that fact ought to be borne in mind that when they do present a record here it has the force of their official position behind it. Therefore they want to have it as accurate as possible. Our engineers have been working, and the difficulties of the situation are not, I think, appreciated entirely. I know that our men are competent and that they have been working at this thing steadily since April.

Mr. TAWNEY. Speaking for myself, we have a series of questions regarding the areas and the waters of these areas that are available in Canada; it would be the same data on the south side of the boundary.

Mr. WYVELL. It is impossible to get that. There are 500 or 600 streams, and it is impossible to get such data. It would cost probably several hundred thousand dollars.

Mr. MIGNAULT. Give us the best information you have.

Mr. TAWNEY. Have there been any surveys of irrigable areas in Montana south of the boundary between the confluence of the Milk and Missouri Rivers?

Mr. WYVELL. There have been very few surveys of irrigable land and practically no measurements of water, because the water in the southern tributaries comes in such an erratic fashion that it has had practically no value for irrigation. It occurs in very short, sudden storms, and there are very few, if any, reservoirs, and so we have considered that waste water. For that reason we have made very few measurements of these tributaries or of the waters which escape out of the mouth of the Milk River, as that water is wasted and is of no practical use to anyone. For that reason we can not give you in such simple form as you desire information comparable to that obtained of the streams to the north. There is such a large number of these little tributaries to the Milk, as has been stated, some of which may not flow for several years in succession, that it does not seem possible with the funds available to attempt to make measurements.

Mr. TAWNEY. It would not be considered as water available for irrigation purposes.

Mr. NEWELL. It has not up to the present time, and no one has attempted to use it. We are not planning any reservoirs now to catch that water.

Mr. TAWNEY. The only tributaries of the Milk River that the Reclamation Service has given to the commission are the tributaries on the west near the source of the Milk River and the tributaries of the Milk River south of the eastern crossing in Montana.

Mr. NEWELL. Those are the only rivers we have measured on behalf of the Reclamation Service, the main Milk River.

Mr. TAWNEY. South of the eastern crossing?

Mr. NEWELL. East of the eastern crossing. We have not measured the tributaries to the south because of their erratic character; we have only measured a few of the tributaries in the north.

Mr. TAWNEY. Has anyone given an estimate of the waters tributary to the Milk River; that is, that enter the Milk River after it leaves the boundary south? Has anyone given an estimate here of the amount of water available for irrigation purposes in these tributaries?

Mr. NEWELL. There has been an estimate of the amount of water that flows from the drainage area, but not the amount available, and we are distinguishing simply between these two. On the amount of water that escapes at the mouth of the Milk River only a small proportion of that would be available for irrigation, because it occurs at times and in such manner as not to be either susceptible to storage or diversion to the land.

Mr. MAGRATH. Why not susceptible for storage?

Mr. NEWELL. Because we do not have the storage points below the points where the water crosses. The site may be at the headwaters and the water may occur lower down.

Mr. MIGNAULT. You could get it by taking the difference between the flow of the Milk River at the eastern crossing and the flow at the mouth?

Mr. NEWELL. That difference would represent the amount that is wasted.

Mr. MIGNAULT. Would it not represent the amount added to the Milk River by tributaries east of the eastern crossing?

Mr. NEWELL. Minus what has been diverted.

Mr. MIGNAULT. Would it not be possible to base a calculation on data of that nature?

Mr. NEWELL. Calculations could be made, but the point I want to make is that up to the present time we have regarded that as of no practical value, because, although we may find 500 second-feet there some year, that water could not be used at present.

Mr. MIGNAULT. Could you give us any data showing what you would calculate to be the total flow of the Milk River at these different points—the eastern crossing and at its mouth?

Mr. NEWELL. That has already been stated.

Mr. MIGNAULT. I suppose there is no difficulty as to that. Would the difference represent the amount added to the Milk River by tributaries east of the eastern crossing?

Mr. NEWELL. Yes.

Mr. TAWNEY. But that difference, or the accretion between the eastern crossing and the mouth of the Milk River, would not represent the water available for irrigation purposes?

Mr. NEWELL. No; and that is a point I want to emphasize.

Mr. POWELL. And that would apply, although in a less degree, to the measurements given in regard to the St. Mary River?

Mr. NEWELL. That is a point to emphasize.

Mr. POWELL. If we have that uncertain factor in the one case, we should have it in the other.

Mr. NEWELL. But to a less degree.

Mr. MIGNAULT. What degree?

Mr. POWELL. In one case it is all prairie land, without any bush, so to speak, and the water runs off it much more rapidly than it does coming down from the mountains, where there is a gradual melting of the snow. I suppose that is the cause of it. But surely we can get at that very easily, as Mr. Mignault has pointed out, by measuring at the eastern crossing and measuring at the mouth and getting the difference between the two; add the amount withdrawn by your irrigation canal and you have it, except in so far as the amount lost in the sand.

Mr. NEWELL. There is another consideration, and that is the returned water. You divert by the canals and a portion comes back.

Mr. POWELL. What percentage do you allow for returned water?

Mr. NEWELL. Different estimates have been made, from 25 to 30 per cent.

Mr. MIGNAULT. It seems to me you have everything required to make the calculation which the commission desires to have made.

Mr. NEWELL. We have submitted all the figures we have, but as to the value of these they have far less value than similar figures for the St. Mary, because the St. Mary has a steady flow.

Mr. POWELL. That is true, but it is for us to make the deductions to base our judgment on.

Mr. CONNER. I wish to correct Mr. Newell's statement. He said the stream measurements on our side had been submitted. On Monday we discovered that there was a difference between the figures we had compiled and those compiled by the Canadian engineers. We had a conference, and as a result of that conference we agreed upon some changes, which changes changed our result. Mr. Stevens has changed the blue print, but we have not the facilities here for making the blue prints to submit to the commission. The data which Mr. Peters has submitted is based on the former report and not as the result of our conference. We desire to submit, and we shall have sent to the commission as soon as we can make them, copies of the results which the Canadian engineers and the American engineers agreed to, and which will somewhat correct Mr. Powell's criticism of our not getting together.

Mr. MACINNES. You stated there is some difference. What does it amount to? I understood there was only a question as to one or two months.

Mr. CONNER. There is a difference as to one or two years, but they affect the details considerably, and we have for 1914 the measurements which gave us a longer period and a better average.

Mr. MACINNES. Can you go into that with our engineers to-night?

Mr. CONNER. We have already gone into it and corrected it and have put it in pencil form.

Mr. TAWNEY. Could you not put that into the record and afterwards have your blue prints made?

Mr. CONNER. That could be done.

Mr. TAWNEY. In that way the accurate facts would go into the record and you could cite the blue prints in evidence of the correctness of the facts.

Mr. CONNER. It was my expectation that Mr. Peters would use these figures in his report instead of the larger figures he has used.

Mr. PETERS. I would like to complete the estimates I was giving of these stream flows, by adding, that to get our estimate of the annual flow of Milk River at its mouth there should be added the canal diversions estimated at 38,000 acre feet, making the total average annual flow of the Milk River at its mouth 732,000 acre feet. I would further add that our estimate of the amount of water available for irrigation in St. Mary River has been based on estimates at Kimball and amounts to 735,000 acre feet. I would add also that our estimate of the amount of water available for irrigation on the Milk River has been based on the measurements made at Hinsdale and amounts to 660,000 acre feet.

Mr. TAWNEY. Do you mean on Milk River available in Canada?

Mr. PETERS. No, sir; I say available for irrigation.

Mr. TAWNEY. Available for irrigation in Canada or for irrigation in the United States and Canada?

Mr. PETERS. Canada and the United States. As these remarks have been made by Mr. Conner since I started to give my evidence, I should like to point out that I do not consider that we could do exactly as he said, because my understanding is that we agreed upon certain figures, and there were certain figures which we agreed not to consider, so that it will not be possible for us to submit stream-flow measurements for the whole year, which we agreed upon. The estimates I have submitted to the commission are estimates of the total annual flow which comprise certain figures that there is a difference of opinion about, or about which we have had no discussion with the U. S. Reclamation Service engineers. We have not agreed on all the figures, we have agreed on a certain number, and others we have simply, as I understand, not considered at all.

Mr. GLENN. Is the difference between you much?

Mr. PETERS. I do not think the differences are very great.

Mr. POWELL. If they are not very great, why not throw them off your side if the other side does not wish to throw them off theirs.

Mr. PETERS. If they throw them off their side I would be better satisfied.

Mr. CONNER. In the preparation of the map I checked up the drainage areas and found some discrepancies, but for the sake of having the thing settled I accepted their figures. I do not feel like giving away everything and getting nothing back.

Mr. PETERS. I want to complete this testimony by saying that a tabulation has been inserted which shows the total irrigable area of the various tracts of irrigable land, the numbers referring to a large map put in as Exhibit L.

Mr. MACINNES. With regard to the reservoirs existing or possible you have some information to give to the commission. Do I understand that the sites of such reservoirs are marked on a smaller map recently put before the commission as Exhibit L2? Will you put information in with regard to these reservoirs in the way of a statement, or a schedule, or both?

Mr. PETERS. I shall read this statement with reference to the possibilities of reservoir construction in Canada:

On the Canadian side of the boundary little development has, as yet, taken place in the reservoirs available beyond the survey of the sites, but with the extension of the irrigation systems in operation it is only a matter of a few years before further construction must be carried on.

Information available as to the sites subsidiary to the St. Mary and Milk River systems shows that the total capacity of the reservoirs at present developed by surveys is 516,000 acre-feet. Estimates available respecting the cost per acre-foot of developing these sites are shown in the schedule included in this statement.

The area of land in Canada is in excess of the amount that the combined flow of these two streams would irrigate. It is necessary to conserve the flood waters of the streams at times when the combined flow is in excess of the required amount. To provide for this, a number of reservoirs have been surveyed and linked up with the canals. Some of these reservoirs are available from either of the systems of canals described while others can only be connected with one system.

THE MARY LAKES RESERVOIR SITE.

This reservoir site is situated in township 1, ranges 24 and 25, west of the fourth meridian. At the present time it is a lake with a water surface of 390 acres. The banks rise abruptly on the south side and part of the north side, while on the west they have a gradual slope. Embankments would have to be constructed across the east and part of the north side in order to impound the water 32 feet above its present level.

In raising the water level 32 feet the area of the water surface would be increased to 975 acres and a capacity of 20,000 acre-feet provided.

The reservoir would be supplied by the canal from the St. Mary River and would discharge into Rolph Creek and thence to the Taylorville Reservoir. The water stored would be available to irrigate tracts 1, 2, 3, 4, and 5.

THE TAYLORVILLE RESERVOIR SITE.

This reservoir site is situated in township 1, range 24 west of the fourth meridian, in the valley of Rolph Creek. There is a lake at the present time having a water surface of 181.2 acres. In order to convert this site into a reservoir it would be necessary to construct four embankments varying from 700 to 1,800 feet in length and averaging 46 feet in height. By so doing a reservoir would be created having a capacity of 42,836 acre-feet and a water surface of 3,721.9 acres. Thus a large area of land would be flooded which is being used mostly for pasture and hay meadow.

The reservoir would be filled from the Mary Lakes Reservoir and would discharge into Rolph Creek and thence to Lumpy Butte Reservoir. The storage water would be used on tracts 1, 2, 3, 4, and 5.

THE LUMPY BUTTE RESERVOIR SITE.

This reservoir site is situated in township 3, range 24 west of the fourth meridian. It consists at present of two lakes which can be

connected by a canal. A dam would have to be constructed across the lower end of each lake, thus forming two separate bodies of water. At the present time the combined water surface of the two lakes is 356 acres. When filled the water surface would be 1,151 acres and the capacity 12,475 acre-feet.

This reservoir would be filled by a canal diverting the water from the Taylorville Reservoir, which canal would be 4 miles long. The reservoir would discharge into the present system of canals operated by the Alberta Railway & Irrigation Co., and the water would be available to irrigate lands in all of the tracts with the exception of No. 8.

THE CHIN LAKE RESERVOIR SITE.

The Chin Lake is situated in township 8, range 18, west of the fourth meridian. The Alberta Railway & Irrigation Co. proposes using it for a reservoir to store water to irrigate some 17,000 acres known as the Taber extension of their system. The water is impounded to a depth of 22 feet, giving a capacity of 32,000 acre-feet. It is proposed to increase the present depth of water by 40 feet, which it is estimated will increase the present capacity to 80,000 acre-feet. To do this it is necessary to construct an embankment across each end of the lake. The water stored in this reservoir would be used to irrigate tract 4 and part of tract 5. It would be supplied from the canals already constructed.

SHANKS LAKE RESERVOIR SITE.

This reservoir site is situated in township 1, ranges 20 and 21, west of the fourth meridian. At present Shanks Lake has a water surface of 1,214 acres. In order to convert it into a reservoir it is necessary to build embankments across several low draws leading away from the lake. These embankments would be five in number, with an average length of some 1,400 feet and varying from 30 to 60 feet in height. It is proposed to raise the present level of the lake 50 feet. This would create a reservoir with a capacity of 95,958 acre-feet. When filled, the reservoir would have a water surface of 4,455 acres.

The reservoir would be filled by diverting water out of the Milk River. The canal to do this would be 12 miles in length, constructed for the most part along the steep side hill of the Milk River. It would be drained back into the Milk River by an excavated canal two miles long and by a natural water course the remaining distance. The water in the reservoir would be available to irrigate all of the tracts with the exception of tract 1.

VERDIGRIS LAKE RESERVOIR SITE.

This reservoir site is situated in townships 3 and 4, ranges 15 and 16, west of the fourth meridian, in the Verdigris Coulee, and at the present time is the bed of a dry lake. It is proposed to erect a dam at the southeastern end, which would impound the water to a depth of 35 feet. This would give a reservoir with a capacity of approximately 100,000 acre-feet, and surface area of some 2,700 acres. It could be filled from either of the systems of canals investigated,

and would discharge out of the southeastern end through a cut 30 feet deep. The water would be used to irrigate tracts 6 and 7.

MILK RIVER RESERVOIR SITE.

This reservoir site is situated in township 5, ranges 19 and 20, west of the fourth meridian. It is formed by the bed of a dry lake and a widening of Kipp Coulee. These two units would be connected by a cut through the height of land between them. It is proposed to impound the water by constructing a dam across a narrow section of the coulee. The water thus impounded would have a maximum depth of 40 feet. By raising the water to this level 1,215 acres of land would be flooded in Kipp Coulee, which at the present time is used for pasture. The land flooded around the old lake bottom is very small while the bottom of the lake is useless. The reservoir would have an area of 2,122.7 acres and a capacity of 47,364 acre-feet.

The reservoir could be filled from either system and the water could be used to irrigate all the tracts except Nos. 1 and 8.

THE RAYMOND RESERVOIR SITE.

This reservoir site is situated in township 5, ranges 10, 20, and 21, west of the fourth meridian. It is a long narrow valley which drains through a coulee at a point in the middle of the north side. In order to convert it into a reservoir it would be necessary to build a dam across this coulee and two embankments, one across the east end and another at a low point on the north side. It is proposed to impound the water to a maximum depth of 40 feet, which would create a reservoir with a capacity of 13,346 acre-feet and a superficial area of 782 acres. Practically all this flooded area is being used for pasture at the present time.

The unit cost of the Raymond Reservoir is found to be higher than the others, but owing to the situation of this reservoir in relation to the land to be irrigated the reservoired water is worth considerably more and the unit cost as shown in the schedule is not thought to be prohibitive.

THE GRUNTON RESERVOIR SITE.

This reservoir site is situated in townships 4 and 5, ranges 17 and 18, west of the fourth meridian. It would be formed by placing a dam below the southeast end of Tyrrell Lake.

The surveys for this reservoir site are not complete, but the estimated capacity is 67,000 acre-feet.

This reservoir would be used to irrigate tracts 6 and 7. In all probability the water stored in this reservoir would have to be diverted through the Verdigris Lake Reservoir to the land.

NORTH TRIBUTARIES OF MILK RIVER.

On the tributaries in Saskatchewan and eastern Alberta the nature of the run-off is such as to render reservoiring a necessity if full advantage is to be taken of the water supply in this district, as

probably 75 per cent of the total run-off in these streams occurs during one month in the year. It will be readily seen that without storage systems it will be impossible to utilize the flow during this period by direct irrigation, and during the remainder of the year the supply is very small.

Surveys were undertaken during the past two seasons and three sites have been developed along the tributaries of Milk River. One, Cypress Lake Reservoir, to supply Battle Creek and Frenchman Rivers; one, on Middle Creek, to supply this stream and the lower part of Lodge Creek; and one on the lower Frenchman River in township 5, range 16, west of the third meridian, to store water for the large flats lying immediately below it in the river valley.

THE CYPRESS LAKE RESERVOIR SITE.

The Cypress Lake Reservoir site is situated in township 6, ranges 26 and 27, west of the third meridian, and has a flooded area of 5,525 acres and a capacity of 126,625 acre-feet, the estimated cost of construction being \$3.80 per acre-foot.

THE MIDDLE CREEK RESERVOIR SITE.

The Middle Creek Reservoir site lies in township 5, range 30, west of the third meridian, and range 1, west of the fourth meridian, with a flooded area of 1,325 acres and a capacity of 21,826 acre-feet. The cost is estimated at \$3.04 per acre-foot.

THE FIFTY MILE RESERVOIR SITE.

Fifty Mile Reservoir site is in township 5, range 16, west of the third meridian, and was surveyed during the past season and is situated in the valley of the Frenchman River at a point most favorable for the irrigation of the fine valley flats commencing some 10 miles below it. The situation is a very good one for a reservoir, the capacity is ample to store enough water to irrigate all the flats lying below it on the river, and a favorable location for a dam was found where a wasteway can be constructed away from the embankment at a low cost. The total length of the dam will be 3,350 feet and its maximum height 61.5 feet, giving a flooded area of about 3,500 acres and a capacity of approximately 80,000 acre-feet. The dam would require about 780,000 cubic yards of earth and 24,868 cubic yards of rock for riprap to give this capacity, while a reservoir of 49,000 acre-feet capacity would need a dam containing 430,000 cubic yards of earth and 19,000 cubic yards of rock. It is estimated that the cost of construction of this reservoir would be between \$4 and \$5 per acre-foot of water stored, so that it will be seen that this is a comparatively cheap development.

Mr. TAWNEY. Have you an estimate of the cost of these improvements?

Mr. PETERS. Yes, sir.

Mr. TAWNEY. Is that part of the report?

Mr. PETERS. No, but it can be put in.

Mr. TAWNEY. It would be well to have the estimated cost of the improvements or construction of these sites.

Mr. MACINNES. You have a memorandum as to that irrigable area and the cost.

Mr. PETERS. Yes.

Mr. GLENN. What does it matter to us whether it costs a thousand dollars or a million dollars.

Mr. MACINNES. Mr. Peters's figures give the number of acres and the cost of irrigating per acre. I agree with Gov. Glenn that it may have nothing to do with it.

Mr. TAWNEY. It will be valuable information as to whether it is an economic proposition or not.

Mr. PETERS. The following is the detail of cost and number of acres referred to:

SCHEDULE OF RESERVOIR SITES.

The following schedule shows the essential particulars of the various reservoir sites, including the St. Mary River Reservoir site above Kimball, which has not yet been accurately surveyed.

Schedule showing reservoir capacities in Milk and St. Mary River watersheds in Alberta and Saskatchewan.

| Name. | Location. | | | Flooded area in acres. | Capacity in acre-feet. | Cost per acre-foot. | Remarks. |
|---------------------|-----------|--------|-----------|------------------------|------------------------|---------------------|--|
| | Township. | Range. | Meridian. | | | | |
| Mary Lakes..... | 1 | 24, 25 | 4 | 975 | 20,000 | \$5.94 | |
| Taylorville..... | 1 | 24 | 4 | 3,722 | 42,836 | 3.62 | |
| St. Mary River..... | 1 | 25 | 4 | | 37,000 | | |
| Lumpy Butte..... | 3 | 24 | 4 | 1,151 | 12,473 | 6.41 | |
| Chin Lake..... | 8 | 18 | 4 | | 80,000 | .68 | |
| Shanks Lake..... | 1 | 20, 21 | 4 | 4,455 | 95,958 | 3.20 | Used by A. R. & I. Co.; not fully developed. |
| Verdigris Lake..... | 3 & 4 | 15, 16 | 4 | 2,700 | 100,000 | 2.66 | |
| Milk River..... | 5 | 19, 20 | 4 | 2,123 | 47,364 | 2.74 | |
| Raymond..... | 5 | 20, 21 | 4 | 782 | 13,346 | 13.05 | |
| Brunton..... | 4 & 5 | 17, 18 | 4 | | 67,000 | 3.00 | |
| Fifty Mile..... | 5 | 16 | 3 | 3,500 | 80,000 | 4.00 to 5.00 | } Surveyed. |
| Cypress Lake..... | 6 | 26, 27 | 3 | 5,525 | 126,625 | 3.80 | |
| Middle Creek..... | 5 | 30, 1 | 3, 4 | 1,325 | 21,826 | 3.04 | |
| Total area..... | | | | | 744,428 | | |

Mr. TAWNEY. Mr. Newell, how does that compare with the cost in the United States?

Mr. NEWELL. As I have listened to Mr. Peters reading the figures they seemed to run about the same as ours. Of course, I am supposing they are nearly all earth structures; no masonry about them.

Mr. PETERS. They are earth dams that we have estimated on.

Mr. NEWELL. They ran about the same cost as ours, I should judge.

Mr. MACINNES. That is a summary of the cost of the reservoirs. I understand you also have an estimate of the cost of irrigating the irrigable area shown on the map.

Mr. PETERS. Yes, I have that, and I present it as follows:

Data as to cost of irrigable areas in Canada.

| Acres. | | Cost per acre. |
|---------|---|-------------------|
| 167,456 | A. R. I. tract..... | \$13.00 |
| 20,000 | Milk and St. Mary River project..... | 19.00 |
| 29,146 | do..... | 21.00 |
| 123,000 | do..... | 22.00 |
| 35,232 | do..... | 25.00 |
| 84,000 | do..... | 27.00 |
| 89,622 | do..... | 31.00 |
| 87,000 | Blood Indian Reserve..... | 18.00 |
| 11,594 | Frenchman River..... | 5.00 |
| 24,000 | do..... | 10.00 |
| 9,359 | Battle Creek..... | 5.00 |
| 8,000 | do..... | 12.00 |
| 7,433 | Lodge Creek..... | 5.00 |
| 8,000 | do..... | 15.00 |
| 871 | Milk River, small schemes..... | 4.00 |
| 204 | St. Mary, small schemes..... | 5.00 |
| 704,917 | | |
| 3,840 | Add to get old total used in memo. prepared irrigation areas. | |
| 708,757 | | |

Mr. MACINNES. Reference is made in Article VI of the treaty to water powers. Would you kindly inform the commission of anything you may know of the applicability of any of the waters in question to power?

Mr. PETERS. I would state, in the first place, that neither the St. Mary River nor the Milk River can be considered as important power-producing streams, because there is no natural head of water that can be developed for water-power purposes, and, secondly, in so far as Canada is concerned, the appropriation for irrigation water takes precedence over any appropriation for water power, so that as irrigation requires that the winter flow of the streams be stored for summer use this means that the power development can only be summer-power development, and therefore not of the greatest value. In order to give some idea of what the possibilities might be in the future I would state, first, with regard to the St. Mary River in Canada that in the first 10 miles measured along the meander of the stream in its course in Canada the stream has a fall of about 21 feet to the mile, or a total fall in its course of 210 feet, and it is possible that in this stretch and above the point where the water would be diverted by the A. R. & I. there might be developed a dam which would create a head of 80 feet. Under certain conditions there would be an average flow of about 1,100 second-feet coming down the St. Mary River which could be utilized at this dam. This would mean a development of about 100 horsepower for each foot of head created, so that it is possible that about 8,000 horsepower might be developed on this river during the summer months.

With reference to the Milk River in Canada I would say that in the first 46 miles of its course from the upper crossing and while running through Canada the fall is from 8 feet to 12 feet per mile; in the next 66 miles there is a fall of from 5 feet to 7 feet per mile, and in the next 10 miles there is a fall of 14½ feet to the mile. This

length of the river is the only part of the river that in all probability could ever have any power developed on it.

Mr. MIGNAULT. Where is that precisely?

Mr. PETERS. That is carrying it down to Writing-On-Stone, which is about 25 miles east of Milk River.

Mr. POWELL. Is that in American territory?

Mr. PETERS. That is in Canadian territory. I am making no reference to American territory.

Mr. TAWNEY. In this last stretch of 10 miles you have mentioned, it would be the only place water power would be available?

Mr. PETERS. No, sir. I was going on to state that it is possible that in this general stretch there might be developed in one or two combined heads 75 feet of head for water-power purposes. And under the same conditions which would allow of a natural flow of 1,100 second-feet down the St. Mary River, there might be a natural flow, including water turned into the Milk River from the St. Mary River by the United States, of about the same amount, which, with the same reckoning, would show a possible development of 7,500 horsepower during the summer months.

I may say that at the present time it would not be possible to develop the power economically on either of these rivers because of the cost of development and the lack of a market. But the estimates quoted have been given more to suggest what may take place in the future when water-power development has a much greater value and when further developments may allow of the utilization of this water power, which would not be possible at present.

Mr. POWELL. The Milk River would be entirely out of the question as a power source. The United States would require the water upon it to be used intermittently so that it would be practically impossible to run any power.

Mr. PETERS. I should say that, in my judgment, in so far as possible they will get a constant flow running through there; my figures are only estimates to give you an idea of what may happen; they are not perfect.

Mr. MACINNES. I would call on Mr. Burley to put in a diagram, which Mr. Wyvell can consider this evening, and if he wishes to he can put questions on it in the morning.

TESTIMONY OF R. J. BURLEY—Recalled.

Mr. MACINNES. You gave us in your earlier evidence information on a diagram as to the existing gauging stations in the United States and Canada?

Mr. BURLEY. Yes, sir.

Mr. MACINNES. I understand you have also prepared a map or diagram showing certain gauging stations which you would recommend to the commission to be established for the purpose of carrying into effect Article VI of the treaty?

Mr. BURLEY. Yes, sir.

Mr. MACINNES. Would you explain this map, which will go in as Exhibit M?

(Map filed as Exhibit M.)

Mr. BURLEY. This map is self-explanatory with the notes around it, which show location of the gauging stations which we consider would be necessary—if the commission would see fit to recommend them—either on an international basis or on the basis of each country carrying on their own measurement and exchanging their records.

Mr. TAWNEY. This might be very important as an index of what the commission might do. It might be well for the other side to see these stations and go over them and we can get their idea as to what changes, if any, should be made.

Mr. WYVELL. This is quite important; we will look over them.

(The commission then took recess at half-past 5 o'clock until 10 o'clock to-morrow, Thursday morning.)

THURSDAY, MAY 27, 1915.

Pursuant to adjournment, the commission met at 10 o'clock a. m., all members being present, Mr. Tawney acting as chairman.

Mr. MACINNES. The last exhibit put in yesterday, Mr. Chairman, was Exhibit M. It shows suggested additional gauging stations both in Canada and the United States. I call the particular attention of the commission to this exhibit for this reason, that it deals not only with the situation in the past, but also contains suggestions on behalf of Canada with reference to the direction which is to be given by this commission as to the measurement and apportionment of the water. Under that language, "measurement and apportionment," it is, of course, quite clear that there has to be measurement for two purposes—first, to ascertain the total quantity of that which is to be dealt with under Article VI, and, secondly, to ascertain the different parts which are going to be delivered to each country to make up the total share to which each country is entitled. I wish to make myself quite clear on that point, because it seems to me it will affect some additional evidence. That exhibit is intended to cover the whole situation in that respect, namely, that the commission can measure all the waters involved and also provide sufficient stations for the delivery of the share of each country after the total amount involved has been ascertained.

Mr. MIGNAULT. Where should the water be delivered?

Mr. MACINNES. The water should be delivered, as I understand it, at such place as each country may desire as to obtain the most beneficial use.

Mr. MIGNAULT. Do you take it that the commission should say where the water should be delivered?

Mr. MACINNES. I presume they will decide, Mr. Mignault, as to where it should be delivered, if there is any conflict between the two countries as to where they desire their share to be delivered; but I fancy that there will be no difficulty there, for each country will come forward and say where it wants its particular share delivered. If that fits in with the desire of the other country, there will be no difficulty. If there should be, then it will be for the commission to harmonize any difficulties as to the places of delivery.

Mr. MIGNAULT. That is to say that each country, being entitled to one-half of the waters, can say where its half will be delivered?

Mr. MACINNES. Quite so, Mr. Mignault; and that share to which each country is entitled will not necessarily be delivered all at one place. It may be delivered in a number of places. For instance, so

as to make this quite clear, there seems to have been an assumption that everything must be divided simply by a rule of actual division at each particular place; but, of course, there must be borne in mind also the provision of the treaty that more than half may be taken from one river, and so forth. That is not a contingent matter between the two countries. It will facilitate both getting their respective shares at the places where it is of the most beneficial use. It is possible that after the quantity has been ascertained it may be made as much by geographical division and by a division of time as by a division of quantity.

MR. MIGNAULT. What do you understand by a division of time?

MR. MACINNES. It might be this, that it may give the beneficial use to both countries of all the water of one river during not merely a particular day but during a particular set of months, during, for instance, the winter season on the one side and during the season specified in the treaty of April to October.

MR. MIGNAULT. That is, one country can have more than half of one river and the other may have a compensating quantity from the other river. Is that your idea?

MR. MACINNES. Yes.

MR. TAWNEY. Do the representatives of both countries agree upon the number of locations of the stations on this map?

MR. MACINNES. That I do not know, because that was put in last night.

MR. TAWNEY. The map was taken away last evening with the understanding that you would go over it and ascertain whether it would meet with the approval of both sides.

MR. MACINNES. I will say this, it may be possible that some of those stations may not be necessary on the suggestion which was made that certain parts of the waters were to be excluded. So far as that is concerned, our view is absolutely clear that it is not a question of what one individual or what one party may do or may possibly even desire, but it is a question of what the treaty says, and if the language is perfectly clear it is not for either of us to raise an objection or ask that certain parts be not dealt with, because what we have before us in certain language. Further than that, if the certain language is before us it is not a question of any evidence. I am not putting in any evidence as to what that language means because—I do not wish to get into any argument, but simply to answer the question—one of the clearest rules of interpretation is, of course, that it is not allowable to interpret that which requires no interpretation.

MR. POWELL. Do you not think you had better reserve this matter for argument?

MR. TAWNEY. Mr. Newell in the close of his statement suggested that the commission proceed with the measurement of the waters as indicated in the treaty and its immediate direction. My thought was that we might get the views of the two Governments so as to aid us somewhat, probably, in determining the location of these stations, and the number that would be necessary. For that reason I wanted to know whether the representatives of both Governments agreed upon the location and number of stations indicated on this

map. If you have not, of course, we will simply accept them as the views of the Government of the Dominion of Canada.

Mr. MACINNES. Speaking for Canada, we have put that exhibit forward. That is satisfactory to us and that is what we suggest.

Mr. TAWNEY. It is simply the views of Canada as to the location and number of gauging stations in Canada that are necessary to secure a proper measurement of the waters under the treaty.

Mr. WYVELL. Mr. Newell and I went over the map and it is perfectly agreeable to us to establish additional international stations at the three most important tributaries which flow through Saskatchewan down to the Milk River at the international boundary, namely, on Frenchman River, Lodge Creek, and Battle Creek. Whitewater Creek and Rock Creek being less important, I do not think we have decided that the necessity of the expense for maintaining those stations is apparent. We are likewise willing to maintain national stations wherever else on the Milk River we think such stations would serve any useful purpose. We are already maintaining stations at Hinsdale and Havre. I think I will let Mr. Newell finish the statement as to the places where we are willing to maintain our own stations on our own territory.

Mr. POWELL. Can not we dispose of our witnesses now, and take this matter up later?

Mr. TAWNEY. We will receive the map as evidence of the wish of the Canadian Government with respect to the location and number of gauging stations. Mr. Wyvell, do you desire to examine Mr. Peters?

Mr. WYVELL. Yes; I have one or two questions that I would like to ask him. Mr. Peters, you said about half of the certain area that was covered or was fed by the Alberta Railway & Irrigation Canal was irrigated. Do you mean on an average about 75,000 acres actually receives water from this canal, or do you mean that as the total amount that ever receives any water from the canal?

Mr. PETERS. I mean that if you take a period of, say, three years, the amount of land that is irrigated would be about 75,000 acres.

Mr. WYVELL. Are you familiar with the conditions of that land last year; that is, in 1914?

Mr. PETERS. In a general way; yes.

Mr. WYVELL. About how many acres of land actually received water last year, to the best of your knowledge?

Mr. PETERS. I could only answer somewhere between 50,000 and 70,000 acres.

Mr. WYVELL. Is it not a fact, Mr. Peters, that canals were kept unusually full last year—the smaller canals that take water from this main canal?

Mr. PETERS. Not to my knowledge.

Mr. WYVELL. Were you there at all?

Mr. PETERS. I keep a general track of all these things. I did not see that very often. I saw it about twice during the season with my own eyes.

Mr. WYVELL. Now, about how much of this 50,000 to 70,000 acres was actually cropped last year?

Mr. PETERS. Of the part that I have stated was irrigated?

Mr. WYVELL. The part that you stated received water; that is, water was actually applied for the purpose of irrigation.

Mr. PETERS. Well, it was all under crop.

Mr. WYVELL. No pasture at all?

Mr. PETERS. Some of it might have had hay cut off of it and then pastured later.

Mr. BIEN. Was that natural hay or hay that was planted?

Mr. PETERS. Timothy hay.

Mr. BIEN. And from the 50,000 to 70,000 acres there were crops taken off?

Mr. PETERS. I believe so.

Mr. WYVELL. I notice your tables show a certain number of acre-feet flowing through the Alberta Railway & Irrigation Co.'s canal. Have you information showing the number of acre-feet going through it by months last year?

Mr. PETERS. I have not that information at hand.

Mr. WYVELL. Can you look it up? I will not take time to have you do so now. Can you look it up and hand me a statement of it before the close of the day?

Mr. PETERS. I think so. Do you want the information for 1914?

Mr. WYVELL. For 1914; yes.

Mr. MACINNES. Mr. Peters, have you got there ready to put in now an abstract of stream flows and hydrographs?

Mr. PETERS. I think Mr. Burley has them.

Mr. MACINNES. Mr. Chairman, Mr. Peters has here an abstract of the stream flow records which have been put in before, and also hydrographs showing the same information in chart form, which he will explain to the commission.

(The abstract of stream flow records above referred to was marked "Exhibit N.")

Mr. MACINNES. Mr. Peters, from what point to what point do these measurements cover?

Mr. PETERS. The summary of stream measurements covers the whole of the St. Mary River from its crossing the boundary to its mouth, and they cover the whole of the Milk River during its course through Canada. They cover the measurements of the north tributaries of the Milk River from near their source to near the crossing of the international boundary.

The hydrographs which are being submitted show the daily flow of the St. Mary River at Kimball and the daily flow of the Milk River at Hinsdale, Mont.

Mr. GARDNER. For what period of time?

Mr. PETERS. For the period of time from 1908 to 1913. They cover the whole year in so far as we have records available from our public records and from the public records of the United States Geological Survey.

Mr. TAWNEY. Those records include the years 1908 and 1913? They cover a period of six years?

Mr. PETERS. Yes, sir.

Mr. MACINNES. The Canadian engineers have also prepared for the use of the commission a map which is the same as the previous maps, showing the drainage areas, which I think was marked "Exhibit A." I suggest that this map be marked "Exhibit A1." It contains the same material as Exhibit A and also the additional material as to the average flow in the different branch areas, as shown by the records which have been put in. In other words, it is

the same map with certain additional material in a more convenient form.

Mr. SANDS. Mr. Peters, does the water that is taken across from the St. Mary flow down the valley of the St. Mary where it is used on the land?

Mr. PETERS. I do not understand your question.

Mr. SANDS. Is the irrigated land from St. Mary River in the valley of the St. Mary River?

Mr. PETERS. A small part of it, I think.

Mr. SANDS. About what part?

Mr. PETERS. I could not say, but a very small part.

Mr. SANDS. And the rest of it is in the valley of what?

Mr. PETERS. It is in the watershed of Pakowki Lake.

Mr. SANDS. The watershed of the land contemplated for irrigation in the Canadian Milk River Canal—what basin or watershed is that in?

Mr. PETERS. That is a part of the same land that it is contemplated to irrigate from the St. Mary River.

Mr. SANDS. Is any of it in the basin of the Milk River Valley?

Mr. PETERS. Yes.

Mr. SANDS. How much?

Mr. PETERS. I do not think I can answer that question.

Mr. SANDS. It is a very small area, is it not?

Mr. PETERS. I believe it is a very small area.

Mr. SANDS. It would not exceed a section of land, would it?

Mr. PETERS. Yes; I think it would.

Mr. SANDS. You could not give a nearer approximation than that, could you?

Mr. PETERS. Without looking at our map I would not like to give you an estimate in acres.

Mr. SANDS. Could you look at your map and tell us? I wish to use it a little later and that is the reason I ask for the information. Just an approximation is all I ask.

Mr. PETERS. Twenty-two thousand acres.

STATEMENT OF MORRIS BIEN, OF THE UNITED STATES RECLAMATION SERVICE, WASHINGTON, D. C.

Mr. MACINNES. Mr. Bien, can you tell us what water rights the Reclamation Service has acquired on the St. Mary and Milk Rivers and their tributaries in the State of Montana?

Mr. BIEN. I can not give you the exact amounts. I did not look that up before I came here, but I can put in evidence the dates of the notices of appropriation and the amounts. I know that the question has come up several times on the Milk River side in connection with private claims, and our first claim of appropriation on the Milk River was in November, 1903. That was under the usual law relating to water rights in Montana, which required the posting of a notice at the point of diversion, the filing in the county records within 20 days and the beginning of work within 40 days thereafter. The work really had begun before the notice was posted, because we had done a great deal in the way of surveying and making investigations.

Mr. MACINNES. Was that in one or more than one county?

Mr. BIEN. I am not sure about the counties. Mr. Sands would probably know.

Mr. MACINNES. Can you give us in convenient form for the commission a summary?

Mr. BIEN. Yes; I can give you the copies of the original notices and everything relating to them. I would like to mention further that after that time the State, in 1905, passed a law giving special privileges, or you might say making special arrangements, for appropriations by the United States, recognizing the fact that its work was very large in extent and in quantity, and that it would not be feasible to do very much in the way of construction in the first 40 or 60 days, so that a law was passed providing that the United States could hold the waters so claimed for three years.

Mr. MACINNES. Can you give us a reference to that law?

Mr. BIEN. It is section 4846 of the Montana Code. It was passed in 1905—I do not remember the exact date—and it is conspicuous by its absence from this compiled pamphlet that Mr. Gunn left yesterday. I presume it was omitted in this publication, which was for mining men and private individuals, because they would not be particularly interested in the rights which the United States had. We can supply that section later. After this law was passed further claims were filed, and the right has been carefully kept alive all the time by filing in accordance with the law after the three years had expired.

Mr. MACINNES. You simply go on making further filings, even though the work is not done?

Mr. BIEN. Yes; that is quite a common practice.

Mr. MACINNES. What do you mean by "a common practice"? There are not any other reclamation services in Montana, are there?

Mr. BIEN. Yes; we have three other projects, perhaps four, in Montana. There is one consisting of two rather independent units.

Mr. MACINNES. They have nothing to do with this matter?

Mr. BIEN. No; I am speaking only of the Milk River project. In speaking of a common practice, I was referring to the practice of private individuals. In order to keep alive their rights, in case they can not proceed strictly with the law, they revive.

Mr. MACINNES. What would happen, then, Mr. Bien, as to subsequent applications by other parties?

Mr. BIEN. Under the law of Montana the rights acquired by such a notice as I speak of relates back to the date of posting if the law is complied with, that is, if reasonable diligence is followed in putting the water to a beneficial use. The law expressly makes that statement, and, as far as the Reclamation Service work is concerned, there can not be any question about the intelligent prosecution of the work, because I think we have averaged a half a million dollars or more a year, sometimes a great deal more.

Mr. MACINNES. You say that if any individual or canal association came in subsequently and built their works before you had completed yours, that you would rank ahead of them?

Mr. BIEN. Yes. We have made protests in a number of cases where applications of that kind were made, and we have adopted the practice of not interfering with or urging a protest against a small

canal, such as would irrigate an individual entry of two or three hundred acres.

Mr. MACINNES. What do you say your filings cover; all the waters and all the tributaries?

Mr. BIEN. All the waters of the Milk River and its tributaries, with diversions at these points where we are building our diversion canals.

Mr. MACINNES. That blanket application or filing by you, you say, is a governing one until your work is completed?

Mr. BIEN. Yes, unless it can be shown that the Government has not proceeded with due diligence.

Mr. MACINNES. Reference was made in the evidence to the irrigable value of what are called the southern tributaries of the Milk River—that is, in the United States—as contrasted with the northern tributaries of the Milk River in Frenchman River. Is there any difference in their irrigable values?

Mr. BIEN. It is a very difficult thing to say what are the comparative irrigable values of two or three streams, unless they vary greatly in their regimen; but I should say, from such knowledge as I have of those streams, that they are approximately the same. They both depend upon rainfall, and much less upon snows.

Mr. MACINNES. Yes, that is what I had been informed; that the values are about the same. Reference has been made in the evidence to the North Chinook Irrigation Association project on Lodge Creek or the West Fork. What can you tell us about that, and what is its present standing?

Mr. BIEN. I think I understand your question to refer to a contract which the United States has made with a number of private ditches on Milk River.

Mr. MACINNES. No; I was not referring to that. That contract refers to all of the canal associations, does it not?

Mr. BIEN. All on the main river but a few smaller ones.

Mr. MACINNES. I was making special reference to the standing of the North Chinook Irrigation Association, which I do not understand to be one of those.

Mr. BIEN. Mr. Sands can tell you about that. I do not know of that particular system.

Mr. MACINNES. Do you know anything about the project, or whether its application is in good standing?

Mr. BIEN. No, sir; I have simply seen references to it, but I have never had occasion to investigate its standing that I can recall.

Mr. MACINNES. Has the Reclamation Service taken it into account, or has it been dealt with in any way?

Mr. BIEN. I can not tell you that. It is not at all impossible that I have signed some letters in regard to it among the hundreds of others that I have signed, but I do not recall any of the facts, and I am pretty sure that Mr. Sands can give you all of them.

Mr. MACINNES. The attorney general of Montana told us that the State engineer of Montana would place at our disposal a Government publication called Sixth Biennial Report of the Montana State Engineer. I see in that report it is stated that the office—that is, his office, the State engineer's office—endeavored to make a compilation of all the records in all the counties in the State of Montana, and an

abstract of such filings or decrees is published in that report. Mr. Conner, who is one of your engineers, I understand, went through that report and gave us a summary of the records relating to the tributaries of Milk River which head in Canada, namely, Lodge Creek, Battle Creek, Whitewater Creek, Rock Creek, and Frenchman River. Have you got that summary there?

Mr. SANDS. I have it here.

Mr. MACINNES. I can read what Mr. Conner gave us. It was this: Rock Creek, 13,300 acre-feet per annum.

Mr. SANDS. Pardon me, we would not object to you reading this into the record if it is understood that it does not include the tributaries of those streams.

Mr. MACINNES. It was given to us by Mr. Conner as covering certain things. I do not want to suggest for a minute that it covers anything else.

Mr. SANDS. But it might leave a wrong impression. That statement simply covered the stream filing itself, and not the tributaries to those streams.

Mr. MACINNES. I think it would only complicate the record by further discussing the matter, Mr. Sands. Perhaps Mr. Conner can tell us what it covers.

Mr. CONNER. I think Mr. Sands is in error. The list included the total tributaries to the main tributary of the river, like, say, Rock Creek. It also included the coulees and tributaries to Rock Creek which formed one branch and basin to the Milk River, and the appropriation examined was the total appropriation within Rock Creek Basin tributary to the Milk River in the United States and not in Canada.

Mr. MACINNES. That is what I thought. It covers each of these creeks and its basin. It states "Rock Creek, 13,300 acre-feet per annum; Frenchman River, 4,500 acre-feet per annum in the United States." The figure given is 13,500 acre-feet per annum, but a side note shows that of that amount 9,000 acre-feet per annum are referable to Canada. It continues, "Whitewater Creek, 3,000 acre-feet; Battle Creek, 1,600 acre feet; Lodge Creek, 2,200 acre feet," making a total of 24,600 acre-feet recorded on the tributaries of the Milk River which head in Canada. I asked you that question, Mr. Bien, because I thought that memorandum had been prepared by Mr. Conner, but as he has given it to us direct, it is just as satisfactory.

Mr. BIEN. I have not any personal knowledge of those details.

Mr. CONNER. Mr. MacInnes, I wish to correct a wrong impression, perhaps. You stated that the report that I made was based upon the report of the State engineer; that is, in your remark I inferred that. My report was based upon investigations by the Reclamation Service engineers in the field, who made a careful table.

Mr. BIEN. I understand that that is the summary of those 10 large volumes that you have been speaking of. I think the details are all contained in those volumes.

Mr. CONNER. That is correct.

Mr. MACINNES. Then, Mr. Conner, those 10 large volumes in your investigation cover not merely anything that is of record in the different counties in the State of Montana, but also what is in actual use on the land?

Mr. CONNER. The object of this investigation was to form a basis for adjudication of the water rights on the tributaries of Milk River in the United States. In order to do that, during the seasons of 1911 and 1912 and the spring of 1913 two or three assistant engineers in the Reclamation Service made this careful survey, first taking the record of the appropriations from the county records and then going into the field and examining on the ground, taking photographs of the improvements and making maps of the irrigable area and canals and ditches as constructed, to determine upon the amount of water put to beneficial use in these various tributaries.

Mr. MACINNES. Then you have covered the whole situation as far as you can.

Mr. CONNER. There was a board of three men, one man from the Land Office, one from the Geological Survey, and one from the Reclamation Service. That should not be taken as an adjudication of the water rights, by any means, but would form a basis for a court decision or assist in a court decision with regard to which one had the first and best right to the small amount of water available.

Mr. MACINNES. In the same summary which you gave us in these 10 volumes there is a statement that on the Milk River proper in the United States there are 500 acre-feet per annum.

Mr. CONNER. Not including the large private canals.

Mr. MACINNES. And they are connected with or covered by the United States Reclamation Service projects, are they not?

Mr. CONNER. In part.

Mr. MACINNES. When you say "in part," explain that, so there may be no misunderstanding.

Mr. CONNER. The location of the upper Milk River canal, known as the Chinook Canal, will not cover the entire area that is now served by these present private canals. I think about 11,000 acres will be outside of the limits of our irrigable area within the reclamation system.

Mr. MACINNES. About 11,000 acres will be outside of what?

Mr. CONNER. Outside of our canals.

Mr. MACINNES. Outside of the Milk River project?

Mr. CONNER. Yes, sir.

Mr. MACINNES. How much water is required for those?

Mr. CONNER. That takes practically all of the Fort Belknap system, and I think their appropriation is 130 second-feet. I should say that would be about 90-second feet.

Mr. MACINNES. Where can the water for that acreage be obtained?

Mr. CONNER. At the present time it is obtained from the normal run-off of Milk River.

Mr. MACINNES. Can it be served from your canal? And if not, what is the difficulty?

Mr. CONNER. That canal heads above our Chinook Canal.

Mr. BIEN. And our canal is not constructed yet. I may say that they get that 90 second-feet only when it is in the river.

Mr. MACINNES. I remember noticing that there is a decree in favor of what is called the Indian agency ditch for 125 second-feet, but there is also information given in some official document that only 62 second-feet are used or can be used. Is that correct, Mr. Conner?

Mr. CONNER. By the Indian Service?

Mr. MACINNES. Yes.

Mr. CONNER. I would not say what has been used by the Indian Service, but the court decree in that matter, I think, Mr. Bien can explain better than I. That is a point of law.

Mr. MACINNES. Will you kindly explain that, Mr. Bien?

Mr. BIEN. The Supreme Court of the United States in that case recognized the right of that Indian canal to the full extent claimed, and based the decision upon their riparian rights. Just what will be the result when the matter is finally worked out no one can tell, because if that decree were enforced precisely as it is drawn most of the private ditches that have been in use there for 30 years or thereabouts would lose all their water. I think something will have to be done in case there is ever an attempt to enforce that decree. As it stands, the situation is precisely as it was before the decree was entered—that is, the Indian canal takes a very small proportion of what is recognized in the decree, and probably will never increase as long as that is Indian land—I should say, because the Indians are not using the waters for irrigation. The canal does not cover nearly as much land as would be irrigated by that amount of water—125 second-feet. Of the small area that could be reached from the canal the Indians are using but a very small proportion, sufficient for only 1,200 or 1,500 acres, if I am not mistaken. It is a very small amount. This 125 second-feet should irrigate something in the neighborhood of 10,000 acres.

Mr. MACINNES. That 125 second-feet was included in that extract from your seventh annual report, making up a total of 450 second-foot appropriations on the Milk River and its tributaries said to be in existence prior to the treaty?

Mr. BIEN. I should think not, because that decision was very much later.

Mr. MACINNES. What is the date of that decision?

Mr. BIEN. I can not give you the date. It is my impression that the decision was after that report.

Mr. MACINNES. The exhibit is there. My recollection is clear that the Indian agency is included for 125 second-feet.

Mr. BIEN. Well, then it was afterwards. Of course, I do not deny what the report says. If it allowed the Indian canal 125 second-foot, it must doubtless have been written after the decision, because we never assumed that the canal would have that right until the Supreme Court of the United States said so.

Mr. MACINNES. I find that the Fort Belknap Indian Canal is included in the list referred to in the Seventh Annual Report of the Reclamation Service.

Mr. TAWNEY. I understood you to say, Mr. Bien, that 125 second-foot would irrigate 10,000 acres.

Mr. BIEN. It depends very much upon what is known as the duty of water. A second-foot will irrigate, in countries where it is applied with reasonable care, 100 acres. That would be equivalent to 12,500. If that amount of water were available anywhere in southern California it would probably irrigate 40,000 or 50,000 acres. In southern California they irrigate from 300 to 500 acres with 1 second-foot. In Montana and in States similarly situated 70 to 80 acres per second-foot is a good duty of water. It all depends upon

the amount of acre with which it is used. In some States the law fixes 70 acres to the second-foot as the minimum allowance, as in Wyoming or Idaho, for instance. I think the State of Montana does not have such a provision. But 70 acres to the second-foot is not unusually good practice in that northern country. Eighty acres is more nearly what is right.

Mr. BURLEY. I want to ask you a question, Mr. Bien, regarding your statement relative to the duty of water. While it is quite true that in Montana they take 80 acres to the second-foot of water, that does not represent a continuous flow in the irrigation season, does it?

Mr. BIEN. It is only during the irrigation season.

Mr. BURLEY. Does that represent a regular flow over the irrigation season?

Mr. BIEN. It varies from month to month. Of course the better way of expressing it is by the acre-foot.

Mr. BURLEY. Then, really, the 80 acres to the second-foot is the irrigating head? It is not merely the duty of water?

Mr. BIEN. It is so spoken of in some of the laws. It is quite commonly referred to in that way. We, in our own reports, always use the acre-foot, which is, of course, the difference between a spigot running continuously and a bucket of water, and, of course, a bucket is what you would want to use in measuring the irrigation water.

Mr. BURLEY. Supposing you had 500 cubic feet per second; while it might irrigate 10,000 acres as an irrigating head, it would be practicable, used during an irrigation season of five months of continuous flow, to irrigate a very much larger area than that?

Mr. BIEN. Yes. The 500 second-feet, to do its best duty, should, of course, be stored in the stream when water is the least used on the land.

Mr. SANDS. You stated, Mr. Conner, that a certain area was irrigated; that water was appropriated for a certain area, is that true?

Mr. CONNER. Yes.

Mr. SANDS. Did that include the possible appropriation of the men living in that vicinity for more land?

Mr. CONNER. The amount given is the amount of water that has been put to beneficial use, including the Rock Creek canal system, and is based not on what they have appropriated but what, in the opinion of the engineers, they have actually irrigated.

Mr. SANDS. In other words, the figures you gave were for the completed appropriation.

Mr. CONNER. Yes.

Mr. SANDS. And not for the contemplated appropriation?

Mr. CONNER. No.

Mr. MACINNES. As the commission is aware, the reports of the Reclamation Service are before it, and I understand a copy is on file in the offices of both sections of the commission. I do not wish to weary the commission by reading a number of extracts from these reports, but the engineers have prepared a summary of the material contained in these reports which we think will be of assistance to the commission. I have it here, and I would ask the other side if they would be good enough to look it over and see whether there is any inaccuracy in it. It might be filed, although it is in the nature of a

summary of the facts. It is part of the evidence already in, and I want to be sure it is accurate.

(Filed as Exhibit O.)

Mr. SANDS. It seems to me it would be properly a part of the brief of counsel on the otherside.

Mr. TAWNEY. It is immaterial; it can go in one way or the other.

Mr. SANDS. We have not had an opportunity of examining it.

Mr. MACINNES. Before closing the Canadian case, I would like the commission to hear what is to be said by other Canadian interests. They have no evidence at all, but they would like to make a statement, and I might ask Mr. Pearce to come forward.

TESTIMONY OF WILLIAM PEARCE.

(Mr. William Pearce, of Calgary, Alberta, appeared and was questioned by Mr. MacInnes.)

Mr. MACINNES. Mr. Pearce, you live in Calgary?

Mr. PEARCE. I do.

Mr. MACINNES. Would you tell the commission what is your knowledge of the land in Canada to be affected by the waters in question, and also tell us with regard to this irrigation project and undertaking in Canada. What experience have you had?

Mr. PEARCE. I first got acquainted with southern Alberta in 1883 and 1884, and I have lived continuously in Alberta up to date. Before going to Alberta at all I had familiarized myself to some extent with irrigation conditions in Colorado and in California, and I immediately, in looking over the situation there, came to the conclusion that irrigation was advisable in southern Alberta, and I commenced to advocate it, and have continued to advocate irrigation ever since. I have been actively interested in most of the irrigation propositions that have been carried on in southern Alberta, and I took a very active interest in the Alberta Railway & Irrigation project ever since its inception. I am an official and represent here the Western Canadian Irrigation Association, and I am also an official of what is known as the Cypress Hills Water Association.

Mr. MACINNES. The first of these is in Alberta and the second is in Saskatchewan?

Mr. PEARCE. Yes.

Mr. MAGRATH. You are a pioneer, are you not, in irrigation in Canada?

Mr. PEARCE. Well, so far as it would apply to the Provinces of Saskatchewan and Alberta I am, but I think there are some ahead of me in British Columbia. I was the first Government official to call attention to the advisability of irrigation, and I have repeatedly called attention to it until I got the movement on. I had very considerable to do with the drawing up of the first irrigation act that was passed by the Parliament of Canada in 1894. I have been over all the lands covered by the Alberta irrigation.

Mr. MACINNES. In what capacity were you over these lands?

Mr. PEARCE. I was connected with the administration branch of the department of the interior of Canada from February, 1882, until about 1902. I then was transferred from the administration branch to the surveys branch until I left the service of the Government in

1904. To render a large portion of southern Alberta at all fit for settlement more or less irrigation is required, the more that it is possible to do the better for the country. If the waters of the St. Mary River were available to the extent to which they could be profitably used in Canada, we could utilize the whole of them to advantage; that is, it would be possible to take the water out of the St. Mary River and profitably apply it to land. The uncertainty as to how much water we are going to have out of the St. Mary River is acting as a handicap or detriment on any further extension of irrigation, not only from the St. Mary River but also in the Cypress Hills district.

Mr. MACINNES. The Cypress Hills affect the Canadian tributaries of the Milk?

Mr. PEARCE. Yes; they are the ones that have been mentioned, chiefly the Frenchman, Lodge Creek, and Battle Creek. Mr. Peters in his evidence yesterday stated that there was a very large irrigable area on what is known as the Blood Indian Reserve. If the canal could be put in the location he showed, as possible from the result of levels, I would estimate that between that canal to the St. Mary River on the east and to the Belly River on the north at least 50 per cent of that area could be economically irrigated. It is splendidly adapted for irrigation, most of it is a gentle slope; it is not hummocky or land that it is hard to get water onto. The water could be brought down and applied to the whole of it, and so far as the soil is concerned it is excellent.

Mr. MACINNES. Excuse me; you say 50 per cent of the commanded area; what percentage did Mr. Peters give?

Mr. PEARCE. Thirty-six per cent.

Mr. MACINNES. And you put the percentage higher than Mr. Peters?

Mr. PEARCE. Yes.

Mr. MACINNES. What is the commanded area?

Mr. PEARCE. I did not figure that out. He showed from levels where his canal could be located, and I state that at least 50 per cent of the area between that and the rivers mentioned could be economically and profitably irrigated. The quality of the soil is as good as any we have in the Province, and from the results obtained in growing alfalfa in the neighborhood of Lethbridge it would be a great alfalfa proposition as well as with regard to anything else you might grow there. I am not as familiar with the Cypress Hills territory, although I have been over it. I have not given it the study that I have to the other. I speak from information received from others with respect to that. In all that country, unless irrigation is carried on extensively, the possibilities will be very much less than with irrigation. My theory of irrigation in that country has been that the products of irrigation should be devoted largely, if not altogether, to forage. We have an immense area of that country that is only suitable for summer pasture, and I want to supplement that by winter feed, so as to make an attempt to reach the maximum possibilities of the country through production.

Mr. MACINNES. What is the position of the Province in which you live with regard to irrigation?

Mr. PEARCE. The Province of Alberta has introduced legislation last session to enable the formation of local irrigation organizations, one of which is formed at Taber, and several others are spoken of.

Mr. MACINNES. By whom is the land there owned to which this water from the St. Mary River or Milk River could be applied?

Mr. PEARCE. The Indian reserve is controlled by the Government; the rest, I think, is in the hands of private individuals now.

Mr. MACINNES. So that it would be those individuals in the Province of Alberta who would be interested?

Mr. PEARCE. Yes.

Mr. MACINNES. What is the object of the association which you represent here?

Mr. PEARCE. To further irrigation and to educate people up to it.

Mr. MACINNES. The suggestion was thrown out here by counsel for the United States that any determination of the rights of the respective countries to this water might stand until the water could be actually applied to the land by either country. What would you say as to that?

Mr. PEARCE. As far as we are concerned in Alberta, we could not get anybody to put any money into the venture unless he was sure of his title to the water. I refer now to any irrigation venture. The title to the water is the vital part to any irrigation scheme, and without that title you could not raise any money at all.

Mr. GLENN. And I suppose the sooner they know how we are going to divide it the better it will be?

Mr. PEARCE. Yes.

Mr. MAGRATH. The irrigation development in the Canadian West is dependent altogether upon private enterprise, and in that respect it differs from the Reclamation Service in the United States?

Mr. PEARCE. Yes; there is no Government irrigation at all with us. The Alberta government did a little, diverting a portion of the High River down the Little Bow, for the purpose of furnishing the settlers along that with water for domestic purposes. Outside of that every bit of irrigation has been attributable to private enterprise.

Mr. MACINNES. Referring back to the figures of the Blood Reserve I see that the commanded area is stated by Mr. Peters as 238,900 acres, of which he places the irrigable area at 87,000 acres, or about 36 per cent, and you place it at 50 per cent.

Mr. PEARCE. Yes.

Mr. MACINNES. That would make 119,000 acres as compared with Mr. Peters's 87,000 acres.

Mr. PEARCE. Yes; that is the area which lies to the east, which slopes toward the Belly River on the north and the St. Mary River on the east. Possibly there may have been in his computation something on the other slope, but it would not be very much. However, that is a matter you could check.

Mr. MAGRATH. I would like to get some idea as to the values brought about by irrigation. I mean the increased value to land through irrigation.

Mr. PEARCE. Well, I think you could place it easily at 10 to 1; I would place it personally at 20 to 1. In the case of land that is used for farming purposes, one acre is equivalent to 10 acres of the

nonirrigated area, and that applies to a very large percentage of southern Alberta.

Mr. TAWNEY. Is there any dry farming in that locality?

Mr. PEARCE. There is some dry farming there.

Mr. GLENN. What is the land worth there where there is no irrigation?

Mr. PEARCE. I do not think there is any market for it, that is to say, land that requires irrigation and has none.

Mr. GLENN. Where it has been irrigated how does it sell?

Mr. PEARCE. They are selling it as high as \$40 an acre, and they just furnish the water and then there is water rental in addition.

Mr. BIEN. What is the value of land that has been irrigated and brought up to a good state of production?

Mr. PEARCE. I can not answer that question because I am not familiar with the sales of land.

Mr. MAGRATH. That is what I wanted to get at, because Mr. Newell makes a statement as to the increased value that will go on from time to time in irrigated districts.

Mr. PEARCE. Well if the products would go on increasing in value, I have seen the statement worked out in figures that some of the alfalfa land in the neighborhood of Lethbridge would stand a value of over \$100 an acre and still be profitable for the investor, but I suppose these are really the most valuable lands we have under irrigation.

Mr. WYVELL. You spoke of some canal that Mr. Peters had spoken about—I believe it was the extension of a canal—would you be good enough to take one of the maps and point out where that is?

Mr. PEARCE. It is on the Blood Indian Reserve. The proposition was to take it out of St. Marys River below the diversion of the Alberta Railway & Irrigation Co. on the West Fork, and bring it out to west of the St. Marys River on to the Blood Indian Reserve; then to carry it northerly to the east of the Belly Buttes and irrigate the country lying between the main canal and the St. Marys River on the east, and Belly River on the north.

Mr. WYVELL. The land which it was suggested that water might reach is now Government land.

Mr. PEARCE. Yes.

Mr. WYVELL. It is true, is it not, Mr. Pearce, that the Government has given in Alberta, and which is now appropriated by the Canadian Pacific Railway Co., the land which is best susceptible to irrigation, is not that true?

Mr. PEARCE. No, I think the Blood Indian Reserve, that portion of it lying in that district, is the finest land in the whole district.

Mr. WYVELL. I refer to those lands which can be irrigated at the cheapest cost.

Mr. PEARCE. I do not think so. The railway company dug out a canal to irrigate their own land.

Mr. WYVELL. That land was granted to them by the Government, was it not?

Mr. PEARCE. It was given to the Alberta Railway & Irrigation Co. as a subsidy for the construction of their railway line.

Mr. WYVELL. Mr. Peters would know more about the conditions of irrigation and the plans of the Government than you would.

Mr. PEARCE. I do not know.

Mr. WYVELL. I will put it this way; he is the best man qualified to make a statement with regard to the situation, is he not.

Mr. PEARCE. What is the statement?

Mr. WYVELL. Mr. Peters is the best man qualified to know of the plans of the Government and the susceptibility of the plans to irrigation, that you know of, is he not?

Mr. PEARCE. He ought to know a good deal more about what the plans of the Government are. In fact, I do not know what they are.

Mr. WYVELL. I read the following from his statement:

A further large area of irrigable land lies in the Blood Indian Reserve, but unfortunately no detailed surveys are available to show what area could be watered from the St. Mary and Belly Rivers. An estimate made by the Dominion Government, 1914, shows some 87,000 acres of land could be irrigated within the boundary of the Indian reserve.

I call particular attention to that part of his statement which says that no detailed surveys are available to show what area can be watered from the St. Mary and Belly Rivers. You know of nothing, Mr. Pearce, to contradict that statement?

Mr. PEARCE. I understood sufficient survey had been made to show where the canal would lie, but no detailed statement of the land lying between that canal. My estimate would be 50 per cent.

Mr. WYVELL. Mr. Peters is competent to know what the plans of the Government are better than you.

Mr. PEARCE. I am accepting his statement as to the surveys that have been made to show where the water could be taken.

Mr. WYVELL. He goes further than that. He states that no surveys are available to show what area can be watered.

Mr. PEARCE. Of course, that is a detailed survey; but he had surveys to show where the main canal could be located.

Mr. WYVELL. But not what area could be watered.

Mr. PEARCE. At all events, I have given an estimate as to percentage.

TESTIMONY OF JOHN D. HUNT.

(Mr. John D. Hunt, of Calgary, Alberta, counsel for the government of Alberta, was then examined.)

Questioned by Mr. MACINNES:

Mr. MACINNES. Will you state to the commission the interests which you represent in this matter and the views which they hold and desire to have presented to the commission?

Mr. HUNT. I was instructed to attend here on behalf of the government of the Province of Alberta, and while I had no instructions to take part to any great extent in the proceedings I was to appear more as a listener, to obtain information from the evidence presented to the commission. There are certain facts that are well known in the Province of Alberta in connection with this irrigation scheme, and these have been dwelt upon or referred to more or less by some of the gentlemen who have already spoken. While we have immense areas of land as yet unsettled in the Province of Alberta, in the north and northwest more particularly, still attention is more and more being drawn to the conditions in the south of the Province.

Our Federal Government in Canada is perhaps not so paternal as that of the United States, and outside of putting on engineers and experts and preparing data they do nothing toward furthering the extension of irrigation in the country. They put up a proposition and give you the figures and say, "There is a certain proposition." We have to depend entirely upon private capital for the development. On this side of the line, I understand, the development is largely in the hands of the Reclamation Service of the United States Government. Therefore, in accordance with the provisions of an act passed at the last session of the Alberta Legislature, any number of farmers, by presenting a petition to the local government, can obtain practically a charter as an irrigation district. They are then in the position of a municipality—they have a charter; they can organize, elect their officers, get their engineers' estimates, and then prepare to float bonds to have the scheme carried out. These bonds must go on the market, and, of course, the first question is the security and the permanence of the water supply. We say, of course, that we have Article VI of this treaty with the United States regarding the Milk River by which a system of cooperation can be carried out that will be satisfactory to both countries, and it is only recently that there was even rumor of any difference in the interpretation of that treaty.

But you can see, gentlemen, I think, that hundreds and thousands of farmers throughout our Province, and I may say a large percentage of whom have come across to us from this side of the line—unfortunately they can not take their interests in the water on this side of the line with them or we would have most of the water of the Milk River now. These men are interested as individuals in the financial end of it; they have no Government to come to their assistance in providing reservoirs and supplying irrigation systems, so that they have to go on the money markets of the world, which is not a satisfactory place to go at the present time, to get money. And knowing what the gentlemen of this commission can do toward settling any indefiniteness, we think that the commission can measure up to the responsibility placed upon them and that there will be no difficulty. Everything is so clearly expressed in the treaty, together with such a wideness of discretion given to the commission, that there should be no difficulty in giving such a definite reply to men who purchase irrigation bonds that we should have no difficulty on our side in going on with our irrigation works.

I have said a little bit more than I intended to say, but from the provincial standpoint it is our view that the sooner we get something definite to go upon the better we shall get along. We have no quarrel and we have no contention with regard to the water. An equitable distribution is right. We like to work on shares, but we do not like to work the way the boy said he was working for the old man; he was working the old man's farm on shares, but the old man got all the shares. What we want is a fair share; we have no objection to our friends on this side of the line getting their fair share; we have no objection to our friends here using our milk-cellar door to slide down if they will only be kind to us. We have nothing to complain of up to date, and we hope we will have nothing to complain of in the future.

MR. MACINNES. From what you stated to the commission I gather that the situation as between the Province and the citizens of the

Province and the Dominion Government is this: That the beneficial interest in this matter rests with the Province and its citizens, and the administration with regard to the water rests with the Dominion Government.

Mr. HUNT. That is correct.

Mr. MACINNES. So that, assuming that your rights to the water under the treaty have been settled by this commission, you say your citizens would apply to the Dominion Government under the Dominion irrigation act.

Mr. HUNT. Yes; for organization we would apply to the Dominion Government.

Mr. MACINNES. So that the interest of the Dominion Government is, so to speak, on behalf of the citizens of the Province.

Mr. HUNT. Yes; as trustees.

Mr. MACINNES. The Dominion Government does not get any money out of it; you do not pay fees to the Dominion Government.

Mr. HUNT. No.

Mr. WYVELL. The irrigation projects to-day in Alberta have been worked out entirely by the C. P. R., have they not? The practical application of the water to the land has been entirely under the control of the interests now owned by the Canadian Pacific Railway Co., is not that a fact?

Mr. HUNT. They have very extensive irrigation interests.

Mr. WYVELL. I say that they are the only ones that are using the water of the St. Mary River on the land.

Mr. HUNT. So far as I know.

Mr. WYVELL. Have you ever been in this irrigation district?

Mr. HUNT. I have been through portions of it.

Mr. WYVELL. Have you ever seen this canal of the Canadian Pacific Railway Co.?

Mr. HUNT. Yes.

Mr. WYVELL. When did you last see it?

Mr. HUNT. Last summer, I think.

Mr. WYVELL. Were you in Lethbridge and Sterling last summer?

Mr. HUNT. Yes.

Mr. WYVELL. Do you know of any particular company or individuals who are actually preparing to take any water from the St. Mary River which are distinct from the interests of the Canadian Pacific Railway Co.?

Mr. HUNT. There is a company which already has made application since our act was passed. Our legislature adjourned on the 21st of April, and we have only had since then to get an application in, and there is one application in now.

Mr. WYVELL. What application is that?

Mr. HUNT. The Taber.

Mr. WYVELL. That was the application spoken of by Mr. Dennis?

Mr. HUNT. Yes.

Mr. WYVELL. He said that application asked some 18,000 acres of land?

Mr. HUNT. Yes.

Mr. WYVELL. And that would be served, of course, by this canal.

Mr. HUNT. By an extension of it.

Mr. WYVELL. Tapping this canal about at what point?

Mr. HUNT. I do not know where they propose the intake; I have seen the plans.

Mr. WYVELL. It does not contemplate any new intake; they are going to tap this canal.

Mr. HUNT. Yes.

Mr. MACINNES. May it please the commission, that is the evidence which we desire to present to the commission, subject to this, the stream flow records on the United States side are to go in.

Mr. WYVELL. Mr. Grover was obliged to leave town last night, and Mr. Stevens has that matter entered. As I understand it, Mr. Conner and Mr. Peters and some of his assistants agreed upon certain mean measurements based on certain actual measurements made to cover various of these districts. There was read into the record by Mr. Stevens the actual records of the flow at the eastern Milk River crossing and at the St. Mary River crossing. These measurements were agreed upon between the two Governments. There were further measurements which were agreed upon, which have not been tabulated, which have not been checked up, and which we do not think can be put in with sufficient accuracy at this hearing. I think Mr. Peters being asked questions by the commission brought out these facts before he intended to, because there was an understanding that he and Mr. Stevens intended to put in the same facts. But the facts they intended to put in differed to some extent from those actually put in by Mr. Peters. Within the course of three weeks they can be checked and submitted to each member of the commission. They can then be put in as accurate measurements.

Mr. MACINNES. Mr. Wyvell has misunderstood me. I was referring to the printed records and not to any extracts taken from them. I want the United States records relating to the stream measurements.

Mr. WYVELL. We have not the copies here, but three sets of them will be sent to the commission.

Mr. TAWNEY. What is the title of the publication?

Mr. WYVELL. Water Supply Papers of the Geological Survey. We will see that copies are sent to Washington and to Ottawa.

Mr. TAWNEY. Have you any additional facts, Mr. Wyvell?

Mr. WYVELL. Mr. Newell will supply a detailed report showing certain irrigable tracts on our side, similar to those supplied by the Canadian side.

Mr. TAWNEY. The question was raised yesterday morning with regard to having any information thus far obtained of the irrigable lands south of the boundary corresponding to the evidence presented by the Canadian side.

Mr. WYVELL. The evidence to be put in by Mr. Newell will refer to certain details in that connection.

Mr. NEWELL. This exhibit which I will file calls attention to the existence, so far as we know, of about 2,332 appropriations by individuals or private parties south of the line.

Mr. MACINNES. Is that a memorandum made by yourself, or are you referring to some other document?

Mr. NEWELL. It is an exhibit which I will insert, and it is a compilation by ourselves. It is a summary of the 10 volumes we have collated containing the several hundred or several thousand applications for water by individuals, but which we do not have in form

comparable to that which obtains in Canada by having the official data in any one place. As I understand it, on the Canadian side all these matters are of record, but on our side of the line, under the existing system, there is no one place in which you could find these applications for water. Some have been printed in the annual report of the State engineer at Montana, which is submitted, and in addition we have tried to give information in 10 volumes, of which this is a condensed statement, of these several hundred men, or several thousand men, who are not represented at all before this commission. It seemed wise to call attention to the fact that these claims exist, and also to explain why we have not been able to prepare a map of the so-called irrigable lands, because no one man or no one body of men know where these lands are located or the varied rights which now exist and which may be established in the future, because we have no system of recording these in Montana. Out of these 2,332 appropriators, at least 888 carry an appropriation of 2,040 second-feet, or about the total flow of the river in ordinary years. I want to emphasize the fact that the Government or the Reclamation Service is interested primarily in this system along the river, for which maps have been filed, and it is only indirectly interested in all this great mass of irrigated lands which lie on the tributaries and to which it does not propose to furnish water nor to interfere in any way with the proper use of water by the individuals. We might have submitted, of course, a great mass of data bearing on these, but our conception has been, as I stated at the beginning, that what you gentlemen are concerned in is the measurement and apportionment of the water to be used, to be measured from time to time by your authorized agents, and we are prepared to furnish your agents, whenever they wish, or to furnish the commission with these data which relate to past conditions. But you are concerned, as I understand, only with the conditions as they occur at the time. To illustrate, while these figures of average flow of what has taken place in the past have interest, they can hardly be used for guidance from day to day any more than if you were to buy a horse, or cattle, or sheep. It is interesting to know how many animals there are in the country and what the prices have been, but the judgment which must be exercised from day to day is not based on the history of the past so much as on these measurements made from time to time by authorized agents, who must use these measurements as they come in and apportion the water. I emphasize that fact because we have had a great deal of stress laid upon average flows, which really show nothing except that the water flowed in that way at that particular time.

Mr. POWELL. Might not the record for a number of years give you a fair idea of the apportioning of the waters in different periods, and might we not then, whenever our actual division is to be made, apportion the water on the basis of these percentages?

Mr. NEWELL. That is a point your agents must work out.

Mr. POWELL. Do you not agree with that?

Mr. NEWELL. Well, merely as an indication. The average flow of the Milk River at Hinsdale is about half a million acre-feet per annum. In 1912 it flowed over. At the beginning of 1913 your agents, if they had existed at that time, would have said: "We had so many acre-feet last year." And the spring started in with a large

flood, but they could not know that the rest of the year would be dry, and if they based their idea on averages they would have been wholly misled, because for the remainder of that year, 1913, the river was practically dry.

Mr. POWELL. There is an idea latent in my mind, which was ratified by Mr. Sands, that if we could by some possibility let Providence be the dispenser of the water—take a certain district say and offset it against another district, on the basis of the general average for years. Then we could probably have only one station where it would be necessary to make an artificial division to balance the whole account, and that possibly would be on the St. Mary River. If that could be worked out, and it is about the only way I see of working it out, I think the data respecting averages would be very important indeed.

Mr. NEWELL. The condition of the St. Mary River is, I grant, the principal key of the situation. We have also these other tributaries which, of course, involve many complications. And Providence has this advantage over us, or over your agents, namely, that Providence can not be criticised while your agents will be susceptible to very definite attack.

Mr. GLENN. And while these measurements may afford some guide, yet they can not be taken as a definite guide.

Mr. NEWELL. That is the point I want to emphasize. I wish to utter a caution against there being any great weight put upon these averages.

Mr. MIGNAULT. Have we no other guide in this matter from past experience?

Mr. NEWELL. Yes, we have the guide of all others, and the one that in my mind is the largest factor in apportioning these waters, and that is the practical experience of the two men who must meet these conditions as business men would, from day to day, using their judgment on the data which come to them during the time their decision must be reached, and that overshadows all past experience in this matter.

Mr. POWELL. If you go to work to apportion these waters at the different places in accordance with these statistics that are given, there will be involved in the job more than any mortal man can accomplish; that is my view. But if, on the other hand, you can offset a certain section of the territory on the basis of the relative production in times gone by, which will be tolerably correct for every year—because hydrometric conditions in that territory can not change tremendously from year to year, relative to other portions of the territory—then you have an automatic system that will work itself out, and the only particular data which would have to be considered by the men who are making the apportionment would be at the proper place on the St. Mary River. If that can be accomplished that is one way of ridding ourselves of the difficulty, and that is about the only way I see that a satisfactory disposition can be made. You can not do it from day to day. How are you going to do to-day? You have to have telegraphic or telephonic communications all along the river. You would have to know how the river was in each particular district to carry that out. The factors that enter into this complicated problem make it a most perplexing one.

Mr. NEWELL. That is exactly it, and it must be solved as business men will solve it in their own daily business, namely, all these men must exercise their judgment. The hydrometric conditions are fairly steady on the St. Mary River but they are of the highest variability on the Milk River. There are large freshets in certain years running to almost a dry river in other years. I think I have made that clear enough so that you may appreciate the difficulties of the situation. The only point I wish to raise in connection with the map of proposed river stations is that we are agreed there should be more river stations, and the only one that would not be worth the cost would be the proposed one at the mouth of the Milk River, which simply shows the water wasted. We believe we must have a point of measurement at the lowest point of divergence on the Milk River, but below that it seems to be an academic question to know how much water is actually wasted at the mouth.

Mr. TAWNEY. If the irrigation projects now contemplated in the two countries were completed, what do you estimate the waste water then would be, or would there be any waste?

Mr. NEWELL. There would be waste water in all the years of large flood, especially on the Milk River. For example, if we take 1912 as typical of Milk River, there was 1,200,000 acre-feet of flood, and there is no probability that when the systems develop they could use even half of that, because it occurred at a time when all the reservoirs would have been full, and most of that would have gone to waste anyway. Nor could you use the average, because reservoir systems and irrigation systems can not be built, as a rule, on what is the average flow, unless the stream is very steady. If the river dropped down, as it did in some years, to less than 200,000 acre-feet, the most of that occurred during the June flood when it was raining, and they did not want much water on the ground, you can see that even then it would not pay to attempt to utilize all that water.

Mr. TAWNEY. Could you deduct from the low-water flow of the St. Mary River the 400 second-feet or the 800 second-feet which it is proposed to divert from that river into the Milk River, and state what the average low-water flow of the St. Mary River would be?

Mr. NEWELL. I would have to trust to memory to do that.

Mr. CONNER. The low-water flow occurs during the winter season. The low-water flow gets along in September down to 200 second-feet or 300 second-feet, but during the irrigation season it seldom falls less than 500 second-feet, and during June it gets up to 3,000 or 4,000 second-feet.

Mr. NEWELL. Of these appropriations for Milk River which are regarded as valid, the total of these represent 5,170 second-feet. That is all valid appropriation, and appropriations which we do not regard as valid run as high as 20,000 second-feet. In other words, from ten to twenty times the flow of the river has been preempted. That incongruity is explained by this: These appropriations are valid only for the time there happens to be water at a particular point, and we are apt to get into that curious position the Supreme Court did in allocating 125 second-feet to this Indian reserve when the actual fact is it rarely if ever could be got there. It is a valid claim, it is true, but you can not take the water unless it is there, and for a good part of the year it is not there. We have that discordance between the statements which we present to you on paper,

and the facts as you will find them when you come to distribute the water from time to time.

Mr. WYVELL. In making plans for reservoirs and other necessary plans, what basis with reference to the flow of the river is used? Is it the average flow, the low flow, or the high flow?

Mr. NEWELL. In the case of a river subject to a steady régime like the St. Mary River we can take something below the average flow. In the case of a very erratic stream, such as the Milk River, we will depend very largely upon what you may call the average low-water flow, and study the months in which that occurs. If it occurs in the spring months we could consider a larger amount than if it occurred in the late fall.

Mr. MAGRATH. Would not your reservoir capacity be a factor?

Mr. NEWELL. Very largely.

Mr. TAWNEY. There has been very little said as to what the effect of the reservoir system of the St. Mary River will have upon regulating the flow of the St. Mary and the Milk Rivers.

Mr. NEWELL. The theory I have had and I have presented it in the paper is, that the effect of the reservoirs would be to smooth out and take off the top of the peak flood of June on the St. Mary. My theory is that during the winter and the spring when the Canadian canal would not wish the water, we would fill up the reservoir above, and during late summer, when the Canadian canal might need all the water in the St. Mary River, there probably would be no question raised but that it should have all the water. The spring floods could supply all the storage we contemplate, and leave a considerable excess. That will be sent down to supply the lands which the Government proposes to irrigate and will not help directly or indirectly the lands which are not within the Government project and which aggregate many times those which we propose to irrigate.

Mr. MIGNAULT. Has it not been stated on behalf of the Reclamation Service of the United States that the St. Mary reservoir would merely suffice to store the United States' share in the waters of the St. Mary River?

Mr. NEWELL. That is what I have contended, and as a matter of history in negotiating the treaty there were many propositions made that we should store more water than Canada, and I think we consistently claimed that that would be impracticable. Of course, we do not know now what is the practical limit of storage; it is largely dependent on the condition of the foundations for the dams.

Mr. MIGNAULT. The water stored in the St. Mary Lakes would be ample to supply the wants of Canada?

Mr. NEWELL. After we have filled the storage reservoirs, the amount that would be left would be ample for six months. In other words, our divergence for storage would not interfere with the needs of the Canadian canal at that time of the year.

Mr. WYVELL. In other words, we would only store water that would necessarily run to waste.

Mr. NEWELL. That is the effect of it. There is one little explanation I would like to make. In Mr. Gunn's statement he referred to the decision of the courts of Montana which awarded an inch to an acre, and several have asked me what that meant. It referred to a miner's inch or the one-fortieth part of a cubic foot per second, and the effect of that decision, if it were literally construed—it was made

by the court with knowledge that the river did not flow steadily—if they were entitled to a miner's inch per acre continuously for 90 days, it would cover that land to a depth of $4\frac{1}{2}$ feet, or if they used it during the irrigation season of 120 days, a miner's inch to the acre would cover that land 6 feet in depth. But, as a matter of fact, they could only get the water when the river is flowing, and therefore the miner's inch to the acre would not cover the land to that depth.

Mr. POWELL. What, if any, is the amount that you have in contemplation as the maximum user for all your developments in Montana, give it in acre-feet?

Mr. NEWELL. We have published the fact that we plan to irrigate 220,000 acres, and that is both by the annual flow of Milk River, and supplemented by storage in St. Mary River.

Mr. POWELL. That is the total consumption?

Mr. NEWELL. Yes; and we have figured that in ordinary years that should be covered to a depth of 1 foot. That was simply based on our present knowledge.

Mr. WYVELL. That, of course, is in addition to what you now receive?

Mr. POWELL. You are not receiving it now.

Mr. WYVELL. No; but an acre-foot additional.

Mr. MAGRATH. What limit of value have you put per acre in your development scheme?

Mr. NEWELL. We have not put any. In many of the earlier reports, which have been introduced in evidence, we have made statements which were the best we could give at the time, but as we get older and get more experience we are less likely to prophesy.

I want also to correct one impression which may have been left on the commission and to which Mr. Bien calls my attention, namely, that our plans for diverting in the St. Mary River are not limited to the amount to be stored, but that when water increased in St. Mary we plan to divert not only stored water but some of the unregulated flow.

Mr. MAGRATH. The statement you made in the early part of the proceedings was to the effect that your expenditure would be \$8,000,000 in irrigating 220,000 acres, which would amount to between \$30 and \$40 per acre. That is the limit of your expenditure per acre at present?

Mr. NEWELL. That is what we have placed before Congress. I wish to present to the commission the following statement:

(Statement filed as Exhibit P.)

MILK RIVER WATER RIGHTS.

DEPARTMENT OF THE INTERIOR,
UNITED STATES RECLAMATION SERVICE,
May 27, 1915.

The following data relate to the rights of use of water of Milk River and its tributaries in the State of Montana.

These data have been collected by three men, representing, respectively, the General Land Office of the United States, the Reclamation Service, and the Geological Survey. Their report is dated April 6, 1915, and is signed by Herman Stahler for the Geological Survey, R. M. Conner for the Reclamation Service, and Charles W. Wells for the General Land Office. In preparing these data and conclusions reference was made to the results of investigations made by assistant engineers of the Reclamation Service; said investigations were conducted during the years 1911 and 1912 and covered all water appropriations and all patented and claimed lands, the latter being homesteads and desert-land filings,

embraced within the drainage basin of the Milk River Valley from Antelope Creek on the east, the Canadian boundary on the north, and the watershed of the Milk River drainage basin on the south and west.

Access was also had to the Water-Supply Papers of the United States Geological Survey and the Canadian water-supply records. The latter were prepared by F. H. Peters, commissioner of irrigation.

TENTATIVE ADJUDICATION OF THE APPROPRIATIONS ON THE TRIBUTARIES.

The report on the private water-supply appropriations made by the assistant engineers above referred to appear to have been based upon a very careful field examination of each initiated water right. In each case where improvements of any considerable extent were made, photographs were taken of the principal structures, and a plane-table survey made showing the extent and location of the principal ditches, and their relation to the legal subdivisions of the land. These reports consist of 2,365 single-spaced typewritten pages, and cover over 2,000 desert-land entries and water appropriations. In so far as possible the owner of the land or water right was interviewed by the assistant engineer regarding the extent and time of beneficial use of the water. In many cases the drainage area above the point of proposed diversion was measured and the amount of probable run-off computed. In case of pumping schemes, the size of the pump and amount of the lift was ascertained and the maximum capacity derived.

From a study of the above records a careful estimate has been made of the amount of water that can be claimed to have been beneficially used from the Milk River and its tributaries from rights initiated prior to the appropriation made by the Reclamation Service, November 2, 1903, and also the amount that can be claimed to have been beneficially used from rights initiated subsequent to that date. The amount required has been taken as 1 second-foot to each 80 acres of the land for which beneficial use has been made, and is not based upon the total area in the land entry. It was impossible from the data available to obtain the total area to which the appropriations were appurtenant, as the descriptions of the land were not in all cases given. It was observed, however, that in a large proportion of the cases where water filings were made for desert-land entries only such irrigation had been undertaken as the entryman thought necessary to acquire title to the land. In some localities, moreover, it was apparent that as soon as patent was secured from the Government, the lands were consolidated with the holdings of large stockmen and irrigation operations abandoned.

In arriving at an equitable understanding as to the amount of water appropriated and the rights consummated by beneficial use, the attempt has been made to assume the attitude which would be taken by a court adjudicating the streams, those rights have been recognized as being valid and alive as a court, using the same evidence, would so recognize.

WATER SUPPLY.

A study was also made of the probable run-off of each tributary of the Milk River above Glasgow, Mont., which place is below all diversion on the river. Also of the possible demands for water that might be made upon each of said tributaries, taking into consideration the valid rights it recognized as existing.

The Geological Survey has maintained gauging stations on Milk River, which were considered in analyzing the possibilities as to the amount of water in the river, the records of said stations being as follows:

MILK RIVER AT CANADIAN BOUNDARY.

[Station located near Goldstone, Mont., T. 37 N., R. 9 E. Drainage area, 2,448 square miles.]

| Year. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Total. |
|------------|---------------------|--------------------|--------|--------|--------|--------|--------|--------|-------------------|---------|
| 1911..... | { 16-31 13,751 } | 16,959 | 22,320 | 20,707 | 14,142 | 7,133 | 25,111 | 12,298 | { 1-7 2,332 } | 135,000 |
| 1912..... | | { 6-30 28,782 } | 19,553 | 8,093 | 6,948 | 3,665 | 3,594 | 4,802 | { 1-16 2,432 } | 77,900 |
| 1913..... | | 56,172 | 32,588 | 19,041 | 11,068 | 5,214 | 1,874 | 4,027 | 4,814 | 135,000 |
| 1914..... | | 20,100 | 10,300 | 6,010 | 1,631 | 416 | 1,290 | 8,420 | ..... | 48,200 |
| Total..... | 13,751 | 122,013 | 84,761 | 53,851 | 33,789 | 16,428 | 31,869 | 29,547 | 9,578 | 390,100 |
| Mean..... | | 31,900 | 21,200 | 13,500 | 8,400 | 4,100 | 8,000 | 7,400 | 5,400 | 99,000 |

MILK RIVER.

[Stations in SE. $\frac{1}{4}$ sec. 5, T. 32 N., R. 16 E., at Havre, Mont. Drainage area, 5,050 square miles.]

| Year. | Jan., Feb., Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|-----------|------------------------|---------------------|---------------------|---------|---------|---------|---------|---------|-------------------|------------------|-----------|
| 1893..... | | | { 15-31 85,800 } | 80,600 | 10,300 | 6,950 | 3,150 | 5,410 | 5,950 | 6,950 | 205,000 |
| 1899..... | 26,400 | 81,200 | 61,900 | 55,900 | 14,800 | 12,000 | 7,800 | 5,780 | 11,300 | | 277,000 |
| 1900..... | | { 10-30 23,400 } | 26,800 | 9,160 | 2,640 | 2,460 | 4,520 | 11,400 | { 1-15 6,780 } | | 82,200 |
| 1901..... | { 10,31 36,900 } | 12,200 | 39,800 | 32,900 | 11,300 | 1,720 | 3,330 | 5,040 | 4,760 | | 148,000 |
| 1902..... | 38,000 | 11,700 | 66,700 | 68,000 | 126,000 | 23,200 | 17,700 | 19,000 | 17,800 | 18,500 | 427,000 |
| 1903..... | 36,200 | 59,300 | 66,300 | 58,000 | 27,400 | 23,200 | 9,760 | 8,480 | 6,840 | 9,040 | 306,000 |
| 1904..... | 14,450 | 103,000 | 22,900 | 16,500 | 2,700 | 307 | 178 | 1,170 | 2,080 | 1,540 | 165,000 |
| 1905..... | 3,045 | 3,510 | 3,810 | 2,080 | 3,320 | 1,290 | | | | | 17,100 |
| 1906..... | { 27-31 1,290 } | 5,630 | 7,320 | 55,600 | 6,210 | 320 | 167 | 92 | 30 | | 76,700 |
| 1907..... | 96,400 | 72,000 | 28,200 | 48,900 | 24,400 | 3,790 | 7,560 | 5,030 | 4,310 | 3,690 | 294,000 |
| 1908..... | 13,000 | 17,600 | 20,300 | 130,000 | 32,400 | 10,900 | 7,380 | 10,900 | 11,100 | | 254,000 |
| 1909..... | 21,800 | 25,600 | 99,000 | 44,200 | 22,600 | 11,100 | 3,140 | 4,530 | { 1-13 2,640 } | | 235,000 |
| 1910..... | 70,440 | 11,700 | 10,300 | 6,130 | 940 | | 536 | 1,280 | 2,040 | 1,540 | 105,000 |
| 1911..... | 21,470 | 19,600 | 25,600 | 23,400 | 19,200 | 7,070 | 39,500 | 17,300 | 5,770 | 2,460 | 181,000 |
| 1912..... | { 24-31 61,900 } | 85,700 | 28,700 | 14,500 | 7,070 | 4,740 | 4,370 | 6,400 | 5,750 | | 219,000 |
| 1913..... | | 80,900 | 37,300 | 21,400 | 11,100 | 5,920 | 982 | 3,710 | 3,780 | { 1-9 1,200 } | 166,000 |
| Total.. | 443,300 | 613,000 | 630,700 | 687,300 | 322,500 | 114,967 | 110,080 | 105,500 | 90,900 | 44,900 | 3,158,000 |
| Mean.. | 34,100 | 41,700 | 40,600 | 43,000 | 20,100 | 7,200 | 6,880 | 6,600 | 6,100 | 6,100 | 200,000 |

NORTH FORK OF MILK RIVER.

[Station at sec. 3, T. 33 N., R. 19 E., near Chinook, Mont. Drainage area, 1,420 square miles.]

| | | | | | | | | | | | |
|-----------|--------------------|------------------|--------|--------|--------|--------|--------|-------|-----------------|----------------|---------|
| 1905..... | | { 22-30 984 } | 2,930 | 2,210 | 2,930 | 972 | | 160 | 1,250 | | 11,400 |
| 1906..... | { 28-31 271 } | 3,670 | 9,530 | 42,200 | 3,900 | 1,110 | 1,190 | 1,730 | 2,340 | | 65,900 |
| 1907..... | { 21-31 3,190 } | 68,400 | 20,400 | 7,620 | 4,600 | 381 | 458 | 842 | 1,200 | { 1-8 379 } | 107,000 |
| 1908..... | 1,840 | 3,810 | 1,840 | 714 | | | | | 328 | 615 | 9,150 |
| 1909..... | { 22-31 762 } | 3,560 | 12,900 | 24,200 | 17,800 | 873 | 73 | 475 | { 1-12 317 } | | 61,000 |
| 1910..... | 21,681 | 3,460 | 915 | 137 | | | | | | | 26,200 |
| 1911..... | 1,170 | 4,870 | 2,980 | 791 | 151 | 26,000 | 2,510 | 1,700 | 615 | | 40,800 |
| 1912..... | | 79,700 | 7,560 | 4,580 | 3,660 | 561 | 590 | 1,330 | 1,070 | | 99,100 |
| 1913..... | 9,040 | 20,300 | 4,210 | 1,560 | 3,550 | 164 | 21 | 234 | 839 | | 39,900 |
| Total.. | 37,954 | 189,000 | 63,300 | 84,000 | 36,600 | 4,061 | 28,300 | 7,281 | 9,044 | 1,609 | 460,450 |
| Mean.. | 7,900 | 22,000 | 7,000 | 9,300 | 4,100 | 450 | 3,100 | 800 | 1,100 | 710 | 51,200 |

MILK RIVER.

[Station in S. W. $\frac{1}{4}$ sec. 17 T., 30 N., R. 30 E., at Malta. Drainage area, 11,200.]

| | | | | | | | | | | | |
|-----------|---------|---------------------|---------|---------|---------|---------|---------|--------|------------------|--------|-----------|
| 1902..... | | | | | | 18,100 | 8,510 | 11,600 | { 1-8 2,820 } | | |
| 1903..... | 49,100 | 105,000 | 63,000 | 67,600 | 25,100 | 25,600 | 17,800 | 11,100 | 8,630 | 10,900 | 404,000 |
| 1904..... | 15,670 | 194,000 | 34,700 | 32,800 | 1,040 | 61 | | | 833 | 922 | 280,000 |
| 1905..... | 16,485 | 476 | 240 | 1,610 | 4,000 | 5,964 | | | | | 28,800 |
| 1906..... | | 595 | 9,780 | 247,000 | 24,500 | 1,400 | 3,770 | 1,940 | 4,370 | | 293,000 |
| 1907..... | | 383,000 | 85,500 | 95,200 | 54,300 | 6,950 | 7,860 | 8,180 | 6,070 | | 647,000 |
| 1908..... | | 21,100 | 8,240 | 132,000 | 19,100 | 7,070 | 7,020 | 11,900 | 17,400 | | 224,000 |
| 1909..... | | 32,500 | 113,000 | 115,000 | 56,100 | 22,300 | 4,750 | 5,070 | 5,290 | | 354,000 |
| 1910..... | 111,120 | 9,880 | 3,090 | 1,480 | 32 | | | | | 31 | 126,000 |
| 1911..... | 16,270 | 7,800 | 23,600 | 10,900 | 19,600 | 5,240 | 103,000 | 24,100 | 6,190 | 3,070 | 220,000 |
| 1912..... | | 330,000 | 75,600 | 42,800 | 15,800 | 13,000 | 8,630 | 12,900 | 12,300 | | 511,000 |
| 1913..... | | { 6-30 127,000 } | 66,400 | 22,400 | 17,300 | 2,960 | 2,420 | 5,100 | 8,570 | | 252,000 |
| Total.. | 208,645 | 1,211,000 | 503,150 | 769,000 | 237,000 | 109,000 | 164,000 | 92,000 | 72,500 | 14,923 | 3,339,000 |
| Mean.. | 41,700 | 110,000 | 45,700 | 69,900 | 21,500 | 9,000 | 13,500 | 7,700 | 6,500 | 3,700 | 304,000 |

MILK RIVER—Continued.

[Station in T. 30, N. R. 36 E., Hinsdale, Mont.]

| Year. | Jan., Feb., Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|----------|------------------------|-------------------|------------------|----------|---------|--------|---------|-----------------|-----------------|-------|-----------|
| 1908.... | ..... | ..... | { 13-31 5,920 | }117,000 | 21,408 | 7,010 | 4,280 | 4,110 | { 1-18 4,750 | ..... | 164,000 |
| 1909.... | ..... | 64,900 | 114,000 | 221,000 | 135,000 | 27,800 | 4,380 | 6,770 | ..... | ..... | 576,000 |
| 1910.... | 160,760 | 34,600 | 4,540 | 3,750 | 429 | 1,590 | 386 | 127 | 164 | 184 | 207,000 |
| 1911.... | 31,200 | 37,900 | 29,300 | 33,400 | 25,700 | 3,900 | 206,000 | 86,700 | 13,100 | 3,070 | 470,000 |
| 1912.... | ..... | 768,000 | 198,000 | 102,000 | 37,100 | 54,000 | 20,100 | 16,900 | 15,800 | ..... | 1,210,000 |
| 1913.... | ..... | { 4-30 192,000 | }80,600 | 41,800 | 28,200 | 5,210 | 2,950 | { 1-24 2,580 | ..... | ..... | 353,000 |
| Total. | 191,960 | 1,097,400 | 432,400 | 519,000 | 248,000 | 99,500 | 237,200 | 114,800 | 39,600 | 3,254 | 2,980,000 |
| Mean. | 96,000 | 224,000 | 77,000 | 86,500 | 41,300 | 16,600 | 39,500 | 19,100 | 7,900 | 1,600 | 500,000 |

The drainage area was computed for all the principal tributaries, and from the mean annual run-off obtained from a study of the record of the gauging stations on the river the amount of probable mean annual run-off per square mile from each tributary was obtained.

From this investigation of the water rights and water supply the following results were developed:

The lowest point on Milk River from which water can be diverted for storage purposes is Dodson. Below this point and above Hinsdale there are 9,400 square miles of basin tributary to the river. It is estimated that for an average year this basin will produce 231,000 acre-feet of water. At Hinsdale the mean annual discharge for the time gauging records have been kept and is 500,000 acre-feet; this includes the year 1912, when there was a total discharge of 1,210,000 acre-feet, about two and a half times the mean discharge, of which 60 per cent occurred during April.

The Geological Survey has kept gauging stations on two of the principal tributaries below Dodson, namely, Beaver Creek and Rock Creek.

Beaver Creek has a drainage area of 2,120 square miles, and the gauging records for the stream are as follows:

| | Second-feet. |
|-------------------|--------------|
| 1914—Apr. 6 | 352 |
| Apr. 7 | 433 |
| Apr. 9 | 1,272 |
| Apr. 11 | 276 |
| Apr. 14 | 88 |
| May 13 | 0.5 |

Maximum, 1,620 second-feet. Total, 12,800 acre-feet. May 1 to 6, total of 48 acre-feet.

| | Second-feet. |
|--------------------|--------------|
| 1905—June 28 | 169 |
| July 29 | 7 |
| July 30 | 46 |

March to August, 4,570 acre-feet. Maximum, 170 second-feet.

| | Second-feet. |
|-------------------|--------------|
| 1906—June 4 | 594 |
| July 14 | 19 |

May 25 to July 25, 114,500 acre-feet. Flood maximum, 6,650 second-feet.

| | Second-feet. |
|------------------|--------------|
| 1908—May 2 | 1.8 |
| May 12 | .4 |
| June 8 | .01 |

| Month. | Maxi- mum. | Mini- mum. | Mean. | Run-off. | Remarks. |
|-------------------|---------------|---------------|-------|----------|---|
| 1909. | | | | | |
| April..... | 5 | 3.5 | 4.68 | 278 | Total run-off, 23,700 acre- feet. Maximum, 755 second-feet. |
| May..... | 50 | 4 | 14.9 | 916 | |
| June..... | 755 | 25 | 190 | 11,300 | |
| July..... | 151 | 12 | 54.2 | 3,330 | |
| August..... | 47 | 0 | 10.4 | 640 | |
| Dry rest of year. | | | | | |
| 1910. | | | | | |
| March..... | | | 170 | 10,500 | Estimated |
| April..... | 34 | .5 | 15.1 | 898 | |
| May..... | | 0 | .05 | 3 | |
| June..... | 0 | 0 | 0 | 0 | |
| July..... | 0 | 0 | 0 | 0 | |
| August..... | 23 | 0 | 1.74 | 107 | |
| 1911. | | | | | |
| March..... | 172 | 27 | 175 | 1,350 | |
| April..... | 19 | 8.4 | 113 | 140 | |
| May..... | 630 | 77 | 421 | 3,370 | |
| June..... | 227 | 5.4 | 443 | 1,550 | |
| July..... | 45 | 35 | 640 | 320 | |
| August..... | 21 | 1.8 | 68 | 160 | |
| September..... | 486 | 7 | 141.7 | 7,400 | |
| Total..... | | | | 14,300 | |
| 1912. | | | | | |
| April..... | 342 | 21 | 118 | 5,640 | |
| May..... | 700 | 17 | 175 | 10,800 | |
| June..... | 99 | 2.8 | 421 | 2,510 | |
| July..... | 610 | .8 | 138 | 8,480 | |
| August..... | 490 | 6 | 104 | 6,400 | |
| September..... | 89 | 3.4 | 2.7 | 1,600 | |
| Total..... | | | | 35,410 | |

¹ For 9 days. ² For 5 days. ³ For 4 days. ⁴ For 18 days. ⁵ For 4 days. ⁶ For 9 days. ⁷ For 26 days.

Beaver Creek overflow.

[Seven days in excess of 14 second-feet in July, 1903. Discharge, July 8-27, 1,860 acre-feet; Aug. 3-8, 24 acre-feet.]

| | Second-feet. |
|------------------|--------------|
| 1904—Apr. 6..... | 646 |
| Apr. 7..... | 1,480 |
| Apr. 9..... | 942 |
| Apr. 12..... | 379 |
| Apr. 14..... | 57 |
| Apr. 20..... | 2.7 |

April 5-25, discharge, 14,200 acre-feet, with maximum of 1,740 second-feet.

| | Second-feet. |
|-------------------|--------------|
| 1905—June 28..... | 118 |
| July 30..... | 5 |

Total March to August, 23,309 second-feet. Maximum, 138 second-feet.

| | Second-feet. |
|------------------|--------------|
| 1906—June 4..... | 476 |

For year, 29,700 acre-feet. Maximum, 1,330 second-feet.

1908—No flow.

| Month. | Maximum. | Minimum. | Mean. | Run-off. |
|------------------|----------|----------|-------|----------|
| 1909. | | | | |
| March 14-31..... | 315 | 1 | 98.3 | 3,510 |
| April..... | 2 | 0 | 0 | 0 |
| May..... | 0 | 0 | 0 | 0 |
| June..... | 956 | 0 | 137 | 8,150 |
| July..... | 57 | 0 | 12.1 | 755 |
| August..... | 0 | 0 | 0 | 0 |
| Total..... | | | | 12,415 |
| 1910. | | | | |
| March..... | | 0 | 75.6 | 4,650 |
| April..... | 10 | 0 | 7 | 42 |
| Total..... | | | | 4,700 |
| 1912. | | | | |
| April 17-30..... | 325 | 26 | 149 | 4,140 |
| May..... | 1,160 | 19 | 266 | 16,400 |
| June..... | 200 | 14 | 70.4 | 4,190 |
| July..... | 800 | 0 | 134 | 8,240 |
| August..... | 920 | 0 | 125 | 7,690 |
| September..... | 108 | 1.0 | 18.2 | 1,080 |
| Total..... | | | | 41,740 |

This shows that the run-off from Beaver Creek basin, above the gauging station, was as follows, in acre-feet:

| | Lower. | Overflow. | Total. |
|--------------------------|---------|-----------|---------|
| 1904..... | 12,850 | 14,200 | 27,500 |
| 1905..... | 4,570 | 23,310 | 27,880 |
| 1906..... | 114,500 | 29,700 | 144,200 |
| 1908 (no discharge)..... | | | |
| 1909..... | 23,700 | 12,410 | 36,110 |
| 1910..... | 11,500 | 4,700 | 16,200 |
| 1911..... | 14,300 | 6,000 | 20,300 |
| 1912..... | 35,410 | 41,740 | 77,150 |
| Mean..... | | | 43,700 |

Rock Creek has a drainage area of 1,480 square miles, and the gauging records for the stream are as follows:

Rock Creek below Rock Creek Canal.

| Date. | Second-foot. | Remarks. |
|------------------------|--------------|---|
| 1905. | | |
| July 5..... | 14 | |
| July 24..... | .5 | |
| Aug. 12..... | .5 | |
| 1906. | | |
| July 21..... | .5 | Flood 1906; maximum 18,000 second-feet. 1906: Apr., 49 acre-feet; May, 13,800 acre-feet; June, 43,200 acre-feet; July 920 acre-feet. Total, 58,000 acre-feet. |
| 1907. | | |
| Apr. 16..... | 1,310 | } Canal dry. |
| Apr. 23..... | 3,670 | |
| Apr. 25..... | 1,390 | |
| May 21..... | 664 | |
| May 28..... | 219 | } Canal large flow..... |
| June 17..... | 217 | |
| July 9..... | 31 | } Canal dry..... |
| July 31..... | 1 | |
| Aug. 21..... | 0 | } April to September, 177,000 acre-feet. Maximum, 5,520 second-feet. Or above 113,000 acre-feet in April. |
| Oct. 21..... | 1.5 | |
| 1910. | | |
| No discharge recorded. | | |

Rock Creek below Rock Creek Canal—Continued.

| Month. | Maxi- mum. | Mini- mum. | Mean. | Run-off. |
|------------------|---------------|---------------|-------|----------|
| 1912. | | | | |
| April 19-30..... | 740 | 114 | 272 | 6,470 |
| May 1-27..... | 1,750 | 40 | 251 | 13,400 |
| June 19-30..... | 114 | 30 | 52.8 | 1,260 |
| July..... | 364 | 10 | 58.5 | 3,600 |
| August..... | 2,400 | 1 | 130 | 7,990 |
| September..... | 216 | 8 | 23.5 | 1,400 |
| Total..... | | | | 34,120 |
| 1913. | | | | |
| April..... | 2,220 | 0 | 216 | 12,900 |
| May..... | 15 | 0 | 2.16 | 133 |
| June..... | 129 | 1 | 24.5 | 1,460 |
| July..... | 268 | 12 | 74.7 | 4,590 |
| August..... | 22 | 3 | 8.32 | 512 |
| September..... | 8 | 2 | 2.93 | 174 |
| Total..... | | | | 19,769 |

Mean for the 6 years, 48,140 acre-feet.

Recognized water rights for diversion of tributaries.

| Creek. | No. | Prior to Nov. 2, 1903. | After Nov. 2, 1903. | Drain- age area. | Per square mile. | Total run-off. | Prior beneficial use. | Probable excess run-off. |
|----------------------------------|-----|------------------------------|---------------------------|------------------------|------------------------|-------------------|-----------------------------|--------------------------------|
| | | | | <i>Sq. miles.</i> | <i>Acre-feet.</i> | <i>Acre-feet.</i> | <i>Acre-feet.</i> | <i>Acre-feet.</i> |
| Cherry Creek..... | 1 | 2½ | 7 | 164 | 22.0 | 3,600 | 300 | 3,300 |
| No..... | 2 | | ½ | 38 | 22.0 | 800 | | 800 |
| Lime Creek..... | 3 | 4 | 5½ | 160 | 22.0 | 3,500 | 500 | 3,000 |
| Bear Creek..... | 4 | 6 | 8 | 104 | 22.0 | 2,300 | 800 | 1,500 |
| Rock Creek..... | 5 | 110½ | 14½ | 1,480 | 25.1 | 37,100 | 13,300 | 23,800 |
| Frenchman..... | 6 | 37½ | 20½ | 2,340 | 25.1 | 58,800 | 13,500 | 45,300 |
| White Creek..... | 7 | 10 | 3½ | 220 | 25.1 | 5,500 | 1,200 | 4,300 |
| White Water Creek..... | 8 | 25 | 12 | 650 | 25.1 | 16,300 | 3,000 | 13,300 |
| Martin..... | 9 | 0 | 0 | 63 | 25.1 | 1,600 | | 1,600 |
| Big Cottonwood..... | 10 | 7½ | 3 | 190 | 25.1 | 4,800 | 900 | 3,900 |
| Woody Island Coulee..... | 11 | 27 | 29½ | 790 | 25.1 | 19,800 | 3,200 | 16,600 |
| Dodson Creek..... | 12 | 2 | 1 | 168 | 21.9 | 3,700 | 300 | 3,400 |
| Mud Creek..... | 13 | 42½ | 1 | 120 | 21.9 | 2,600 | 5,100 | |
| Eureka Coulee..... | 14 | | | 50 | 21.9 | 1,100 | | 1,100 |
| Savoy Creek..... | 15 | 54 | 23 | 203 | 21.9 | 4,400 | 6,500 | |
| Wayne Creek..... | 16 | 29 | 4 | 135 | 21.9 | 3,000 | 3,500 | |
| Thirty Mile Creek and Foggy..... | 17 | 109 | 29½ | 230 | 21.9 | 4,800 | 13,100 | |
| Fifteen Mile Creek..... | 18 | 5 | 1 | 60 | 21.9 | 1,300 | 600 | 700 |
| Coal Creek..... | 19 | | | 45 | 21.9 | 1,000 | | 1,000 |
| North Fork Milk River..... | 20 | 13½ | 51 | 1,390 | 39.4 | 51,200 | 1,600 | 49,600 |
| West Fork Milk River..... | 21 | 18 | 89 | 1,140 | 21.9 | 25,000 | 2,200 | 22,800 |
| Red Rock Coulee..... | 22 | 31 | 8 | 375 | 21.9 | 8,200 | 3,700 | 4,500 |
| Milk River..... | 23 | 4 | 3 | 665 | 19.6 | 13,000 | 500 | 12,500 |
| Milk River in Canada..... | 24 | | | 2,540 | 40.4 | | | |
| Big Sandy..... | 25 | 175 | 134½ | 1,660 | 19.6 | 32,500 | 21,000 | 11,500 |
| Beaver Creek..... | 26 | 18 | 2 | 120 | 19.6 | 2,400 | 2,200 | |
| Bulhook Creek..... | 27 | 3 | 5½ | 70 | 19.6 | 1,400 | 400 | 1,000 |
| Box Elder..... | 28 | 91½ | 17 | 127 | 21.9 | 2,800 | 11,000 | |
| Clear Creek..... | 29 | 45 | 20½ | 120 | 21.9 | 2,800 | 5,400 | |
| Black Creek..... | 30 | 2½ | 2 | 78 | 21.9 | 1,700 | 300 | 1,400 |
| Six Mile Coulee..... | 31 | 4½ | 6½ | 65 | 21.9 | 1,400 | 500 | 900 |
| Snake..... | 32 | 79 | 23 | 347 | 21.9 | 7,600 | 9,500 | |
| White Bear..... | 33 | | | 228 | 21.9 | 5,000 | | 5,000 |
| Peoples..... | 34 | 54 | 19½ | 826 | 21.9 | 18,100 | 6,500 | 11,600 |
| Alkali Creek..... | 35 | 8 | 4 | 430 | 21.9 | 9,400 | 1,000 | 8,400 |
| Beaver and Larb..... | 36 | 18 | 6½ | 2,120 | 25.1 | 53,200 | 2,200 | 51,000 |
| Hay and Buffalo Co..... | 37 | 11 | 1 | 110 | 22.0 | 2,400 | 1,300 | 400 |
| Antelope..... | 38 | 11 | | 76 | 22.0 | 1,700 | 1,300 | 1,400 |
| Brazil..... | 39 | 10 | 1½ | 120 | 22.0 | 2,600 | 1,200 | 1,100 |
| Willow..... | 40 | 1 | 2 | 425 | 22.0 | 10,500 | | 10,400 |
| Total..... | | 1,019½ | 560 | 20,230 | | | | |

Nine thousand in Canada; 4,500 in United States.

WATER RIGHTS AND DIVERSIONS ON MAIN STREAM.

The appropriations on the main river have been considered, and outside of the larger canals the amount of valid rights total 15 second-feet, which is diverted by means of pumps. The following larger canals take out of the Milk River and the North Fork, and have rights to the amount shown:

| | Second-feet. |
|--------------------------------|------------------|
| Miscellaneous..... | 15 |
| Fort Belknap Agency ditch..... | ¹ 125 |
| Fort Belknap Canal..... | 130 |
| Matheson ditch..... | 28 |
| Paradise Canal..... | 19 |
| Cook Canal..... | 50 |
| New Harlem..... | 75 |
| Winter & Anderson..... | 12 |
| | <hr/> 454 |

The amount of 125 second-feet or more was decreed to the Fort Belknap Indians by the court in the case *Winters v. United States* (207 U. S., 564).

The remaining 314 second-feet of the larger canals is diverted in the vicinity of Chinook, and the land covered by these canals will become a part of the Milk River reclamation project under the two proposed Chinook canals of 550 second-feet combined capacity.

Milk River rises in the United States in the Blackfoot Indian Reservation and flows northerly into Canada, and thence easterly for 179 miles, when it again enters the United States. The Geological Survey states in Water Supply Paper No. 326, page 111:

"An irrigation company in southern Alberta, Canada, has been granted an appropriation of 500 second-feet of the low-water flow and 1,200 second-feet of the high-water flow, and a canal of 330 second-feet capacity has been partially constructed, but no water has been diverted."

This right is understood to be valid, and it is believed that eventually but a very small supply can be expected from Milk River at the international boundary, and it has been entirely eliminated in this consideration as an available water supply.

Frenchman Creek, tributary No. 6, has a total drainage basin of 2,340 square miles, the upper portion amounting to 2,110 square miles in Canada. The valid Canadian water rights on this creek amount to 75 second-feet. This may be materially increased in the future, but it is now taken at that figure from information found in Canadian water-supply papers.

In this investigation 2,332 appropriations, amounting to 56,378 second-feet (not including Canada rights), have been considered. Of these, 888 have been held to have valid rights carrying 2,048 second-feet. The total appropriations on the river and its tributaries prior to and including November 2, 1903, are as follows:

| | Second-feet. |
|--|--------------|
| Tributary appropriations..... | 1, 020 |
| Fort Belknap Indian ditch..... | 125 |
| Miscellaneous river rights..... | 15 |
| Reclamation Service rights, Nov. 2, 1903: | |
| Chinook North and South Canals..... | 850 |
| Dodson North Canal..... | 200 |
| Dodson South Canal (this canal supplies Nelson reservoir, which has a capacity of 133,000 acre-feet; the distributing ditches from this reservoir have a capacity of 600 second-feet)..... | 900 |
| Vandalia South Canal..... | 300 |
| In Canada: | |
| Frenchman Creek Canals..... | 75 |
| Canadian Irrigation Co., direct irrigation..... | 500 |
| Canadian Irrigation Co., flood flow..... | 1, 500 |
| Appropriations on tributaries, initiated subsequent to Nov. 2, 1903, in United States..... | 560 |

¹ Or more.

Diagrams have been prepared showing the hydrometric conditions at the gauging stations on Milk River at Malta and Hinsdale for the period 1909 to 1913, inclusive. Each of these stations is below the points of diversion of all valid rights, excepting the pumping plants of 15 second-feet and the Vandalia ditch of the Reclamation Service.

It should be understood that the run-off at Hinsdale is considered to represent the whole discharge recorded of the river from the area in Canada and the United States, and does not include the amount diverted at higher points. The heavy flood in September, 1911, washed out the greater portion of the small storage reservoirs constructed on the tributaries and these were not replaced in 1912, and but a few, if any, in 1913. The years 1909 and 1912 were wet years in Milk River Valley, and 1910 and 1911 were exceptionally dry years until the heavy rain and consequent flood in September, 1911. The total valid rights to and including November, 2, 1903, on the tributary and main river in the United States and Canada amount to 5,170 second-feet. The feeder canal to the Nelson Reservoir is included in the 5,170 second-feet, and it has a capacity of 900 second-feet.

CONCLUSIONS.

1. Above Dodson, the water requirements under valid rights initiated prior to November 2, 1903, on the following-named creeks tributary to Milk River, exceed the probable mean annual run-off: Mud, Savoy, Wayne, Thirty Mile, Foggy, Upper Beaver, Box Elder, Clear, and Snake. The remaining tributaries above Dodson afford a surplus over the requirements under such prior rights at flood periods for a few days only.

2. Between Dodson and Hinsdale Beaver and Rock Creeks afford a surplus of flood waters and it is probable that the construction of small reservoirs with rights to flood waters on these streams could be allowed. Rights for such reservoirs would be junior to existing valid rights initiated subsequent to November 2, 1903, amounting to 15 second-feet on Rock Creek and 6 second-feet on Beaver Creek and would relate only to flood waters occurring when Milk River is also in flood.

Other tributaries between Dodson and Hinsdale afford only short flood flows in excess of valid rights initiated prior to November 2, 1903.

3. Below Hinsdale the tributaries are dry during the greater part of the irrigation season, but afford a small amount of flood run-off in excess of present beneficial use. It is possible that small reservoirs could be utilized to advantage on some of these streams.

4. Rights for direct diversion from the tributaries of Milk River initiated subsequent to November 2, 1903, do not afford a reliable source of water supply for irrigation. Such rights, if accompanied by opportunity for storage from floods, in the amount of one acre-foot of water per acre of land to be reclaimed, may in some cases afford a fairly reliable water supply. All such cases should be scrutinized with care to determine whether sufficient excess flood water to warrant favorable consideration is available.

5. On Milk River, from Goldstone to Vandalia, there is not sufficient water during the irrigation season to supply the Reclamation Service canals after satisfying valid rights initiated prior to November 2, 1903.

Above Dodson there is no surplus flood water that can be made available for irrigation use. Below Dodson there is an apparent surplus of flood waters in most years, but it is believed that it would be impracticable, in view of the known condition of run-off, to conserve such water for irrigation in the Milk River Basin.

Mr. MACINNES. Not having had an opportunity of reading over your memorandum (Exhibit P), but in connection with what you have stated just now, you spoke in connection with the Milk River as to irrigation rights and irrigable lands; the two things are different.

Mr. NEWELL. Of course the irrigated lands are limited by the water which may be available from these rights. The irrigable lands, lands which may be irrigated if there is water enough, are indefinite.

Mr. MACINNES. But you spoke of the two together. As to irrigation rights, that is the right to take water, that is a matter which can be discovered by an investigation of the record or by an examination of the lands to find out where these rights could be put to beneficial use.

Mr. NEWELL. Yes.

Mr. MACINNES. And I understand that your Reclamation Service, although not directly interested, as you say, has investigated that situation.

Mr. NEWELL. We have endeavored to, yes.

Mr. MACINNES. And the result of that has been given to the commission.

Mr. NEWELL. In this condensed form, which is filed as Exhibit P, which relates to the 10 volumes which are at their disposal.

Mr. MACINNES. And I understood in that connection, that while there are a large number of irrigation rights recorded, that the amount put to practical use or beneficial use does not in any way correspond to that.

Mr. NEWELL. That is correct.

Mr. MACINNES. Then as to irrigable lands, or lands which can be irrigated, while there may be a certain doubt as to the percentage of the area which can be commanded, still an estimate can be made, can it not?

Mr. NEWELL. Yes; an estimate can be made.

Mr. MACINNES. And so far as the Milk River Valley is concerned, you have made that estimate in the reports of your Reclamation Service?

Mr. NEWELL. We have endeavored to.

Mr. MACINNES. And you have put that irrigable area at 220,000 acres.

Mr. NEWELL. That is the portion the Reclamation Service proposes to deal with.

Mr. MACINNES. And that irrigable area can, I presume, be shown on a map for the use of the commission in the same way as has been done on the Canadian side.

Mr. NEWELL. We have submitted that map, showing the lands we propose to irrigate; that is one of the exhibits.

Mr. MACINNES. You can show the irrigable area in that district.

Mr. NEWELL. That shows the 220,000 acres.

Mr. MACINNES. As to anything outside of your estimate, could you not show to the commission what is called technically the possible commanding area and the proportion of that which may be irrigated.

Mr. NEWELL. I doubt if we have information at the present time to do it. We confined our work to the lands we are reasonably sure of reaching, but outside of that it is speculative as to what may be done.

Mr. MACINNES. At the same time you have further gone over all of that land and have 10 volumes here as a result of your investigation.

Mr. NEWELL. What lands do you refer to?

Mr. MACINNES. You have 10 volumes that have been carefully examined and is it not possible to show to the commission where these lands are?

Mr. NEWELL. I should think so, perhaps.

Mr. BIEN. A good deal of that land is not surveyed, and it would be almost impossible to locate it on a map. In a great many cases the surveys show only the lands, but not their relation to the public lands surveyed. The area is so small in each individual case, one or two thousand acres, and sometimes only 20 or 30 acres, that it would be a mere dot on the map.

Mr. MACINNES. Still, you have investigated the situation thoroughly?

Mr. BIEN. Well, with sufficient thoroughness to gain these broad impressions. As to whether a map could be prepared we have not yet thought it worth the labor, but something of the kind could be prepared, I suppose.

Mr. MACINNES. And Mr. Conner has given us a schedule of the amount of water which is being put to beneficial use outside of your area.

Mr. NEWELL. Yes; so far as he could ascertain it.

Mr. MACINNES. So that the commission has on record your estimate as to the land that could be irrigated under your system, and also these 10 volumes which have been referred to.

Mr. NEWELL. Yes.

Mr. MACINNES. And which show what is being done.

Mr. NEWELL. Yes.

Mr. MACINNES. You spoke, Mr. Newell, as to the commission being guided in dealing with the matter simply on present conditions; how would it be possible in that view to make any large development in a country where there was that possibility of uncertainty?

Mr. NEWELL. The largest element of uncertainty is the natural condition. There is not, as I see it, very much future development that can be very safely entered into for a number of years, until we know more about the extent of the present development. I do not view it that you can have any great degree of certainty, even if the commission should endeavor to decide some of these questions, because their decision, based on the present knowledge, might not fit the conditions as developed by the future measurements made from time to time.

Mr. MACINNES. Yes; but anything outside of the area commanded by your service is small and scattered, is it not?

Mr. NEWELL. Yes; but in the aggregate quite large.

Mr. MACINNES. The situation is not the same as demonstrated on the Canadian side.

Mr. NEWELL. No; your conditions are, I should say, quite different. On the St. Mary River you could make a reasonable certainty based on the steady flow of the river in the past, but on the other streams any large developments are quite problematic.

Mr. MACINNES. And you can see by the map showing the irrigable areas in Canada that there are possibilities there of irrigation development on a large scale.

Mr. NEWELL. There are possibilities, yes.

Mr. MACINNES. How could it be expected that capital could be obtained for this development if the right was left unsettled.

Mr. NEWELL. I do not see how capital could be obtained under any of these conditions. I suppose they would go on the idea that no

great irrigation development will take place for a great many years in any of the arid regions.

Mr. MACINNES. But without the right to take water, even if it is uncertain, it is obviously impossible to obtain financial support?

Mr. NEWELL. Yes; and I doubt very much whether the action of the commission would strengthen the ability to obtain capital.

Mr. MACINNES. Would not the situation be improved by removing the uncertainty as to water and leaving the only uncertainty as to legal conditions?

Mr. NEWELL. The natural conditions will overshadow the legal conditions, as in the case of the Supreme Court allotting 125 second-feet to an Indian reserve, where there was not that much amount of water. That would not reduce the great uncertainty as to where they would get the water.

Mr. MACINNES. But still as to natural conditions we have a pretty good guide from the record of past years.

Mr. NEWELL. That is a point that I would seriously question. The records of past years show only what happened in past years, and it is only a very doubtful inference that they will show what will happen next year or the year after.

Mr. TAWNEY. If the uncertainty with regard to the division of this water might retard, or is retarding, irrigation developments in either country, can you explain why those interested have never brought the matter to the attention of the commission at all? This treaty was negotiated some years ago, and since the commission was created there never was a request that the commission should act. This action was taken on the motion of the commission itself. If this uncertainty is retarding development in either country, those who are interested in the development have not gone to the trouble of having that uncertainty removed by having the commission proceed under the treaty for the measurement and apportionment of these waters.

Mr. MACINNES. The matter is now before the commission, and you are going to deal with it, and if your decision and your dealing with the matter throws it back into a state of uncertainty then the position of the Canadian interests would be jeopardized.

AFTER RECESS.

THURSDAY, MAY 27, 1915.

The commission reconvened at the expiration of the recess, all the members being present.

Mr. TAWNEY. I understand that the representatives of the two Governments desire to put in a little more testimony.

Mr. MACINNES. When the commission arose at the noon hour, Mr. Chairman, Mr. Newell had put in Exhibit P. That is now being examined by our engineers. I do not know whether there will be any questions to be asked on that, but we will let you know as early as possible.

The only other matter that I wish to mention is this: That Mr. Newell in his statement which he read made reference to what he thought was the understanding of Canada with regard to getting storage before the treaty was made. He also made a similar statement in his opening remarks, which you may remember, as to what

he thought was being covered by the treaty, to which, of course, at the time I at once took objection, because anything that is in any man's mind is not evidence before any court or any commission.

My learned friend was not there, but I spoke to Mr. Newell and suggested that rather than have appear upon your record a statement by him of what he thought and an objection on our side, that is to say, that granted he thought that, we in Canada all thought the opposite, that all of that should be stricken out, because it is not proper evidence before any tribunal, and Mr. Newell entirely agreed with me.

Mr. SANDS. I think there might be an objection. Mr. MacInnes's thought may be different from the thought of Mr. Newell regarding this treaty before it was enacted. His thought as to what the understanding was would be probably proper in the record.

Mr. TAWNEY. The statement of Mr. MacInnes is to the effect that he has had a conversation with Mr. Newell respecting certain matters mentioned during this morning's session which the two gentlemen have agreed should be eliminated from the record. As I understand it, it is between them to say what should or should not be stricken out.

Mr. WYVELL. From Mr. Newell's testimony, certainly.

Mr. GLENN. It is not what they think is the construction of the treaty; it is what we think.

Mr. NEWELL. I am perfectly willing to have stricken out all reference to what I thought at the time. I endeavored not to commit either side, but simply to state what were my impressions, and, if there is any objection to it, I see no reason why it should not be stricken out, because the papers introduced cover very clearly what we had in mind, and my intention in stating that was merely to prove those papers.

Mr. SANDS. Mr. Newell was the man who was delegated to draw this treaty.

Mr. TAWNEY. We are not striking out what Mr. Newell said in his opening statement, but only the statement that he made here with reference to what he knew at the time or prior to the time of making this treaty. The impressions or thoughts that he may have had individually is all that I understand will be stricken out.

Mr. MIGNAULT. It does not make any difference, because it could not influence the construction of the treaty.

Mr. MACINNES. It forms a part of the record, and it seems embarrassing in the future to have it there. Obviously it ought not to be there.

Mr. TAWNEY. Is there any private or corporate interest on either side of the line that desires to present any facts?

Mr. SANDS. I would like to present some facts in behalf of the people of the lower Milk River Valley. I would like first to recall Mr. Peters for some information that he was to give us.

STATEMENT OF F. H. PETERS, COMMISSIONER OF IRRIGATION, CALGARY—Continued.

Mr. SANDS. Mr. Peters, I asked you to tell us what part of the watershed of the St. Mary could be irrigated from the A. R. & I. Canal.

Mr. PETERS. Approximately 27,000 acres.

Mr. SANDS. Is any part of that now irrigated?

Mr. PETERS. Yes; a small part of it.

Mr. SANDS. About how much?

Mr. PETERS. Perhaps 2,000 acres.

Mr. SANDS. Now, what part of the watershed of the Milk River Valley can be irrigated from the Milk River Canal?

Mr. PETERS. Twenty-two thousand acres, approximately.

Mr. SANDS. Has any portion of that been irrigated?

Mr. PETERS. No.

STATEMENT OF W. B. SANDS, OF CHINOOK, MONT., REPRESENTING THE WATER USERS OF THE MILK RIVER VALLEY IN MONTANA.

Mr. SANDS. My name is W. B. Sands. I represent the water users of the Milk River Valley, in Montana. I am an attorney and have resided in the Milk River Valley for the past 25 years and at Chinook for the past 20 years. Before that I resided most of the time at Harlem, where I conducted a store. For two years of that time I was in the University of Minnesota and four months in Duluth; otherwise I have been at Duluth all the time. While in the university I took a short course in engineering, as well as a law course later.

I am financially interested in all of the canals that are taking the water out of Milk River, that is, the Fort Belknap, the Paradise, and the Harlem Canals. I am also interested in and own land under the Havre Irrigation Co.'s Canal, which takes water from Beaver Creek south from Havre; in the Cook Irrigation Co. Canal, which takes water from Battle Creek; in a private canal taking water from Snake Creek, which is a stream flowing in from the south; and in the Rock Creek Canal, which is near Hinsdale.

I mention this to show that I am, or at least ought to be, conversant with the situation along almost the entire valley of the Milk River, as Havre is situated at the extreme west and Hinsdale at almost the extreme east end. I should also say that I am interested in land owned by a corporation at Woodbridge, near Bowdoin Lake, which will be irrigated from the reclamation project. During the past 10 years I have resided on my ranch adjoining the town site of Chinook, the house on which is situated within a few feet of the bank of Lodge Creek, or, as we call it, West Fork, so that I have been conversant with its flow. I have taken a personal interest in irrigation, and, situated as I am at my home, where I can observe the irrigation of the lands on my ranch, I perhaps have an uncommon amount of knowledge for an attorney of the actual irrigation of land. Furthermore, it is a sort of recreation for me to shoulder a shovel and go out after office hours and assist in or direct irrigation. So I may say that I have some knowledge of the duty of water.

I was United States commissioner for 12 years and as such was very familiar with the conduct and practice of the land office in regard to entries and final proof. As an attorney I have also prepared many—I may say quite a large percentage—of the water-right filings in the Milk River valley. I have also been interested in nearly all of the legal controversies respecting the water rights there. Fortunately, we have not had very many. I have also been very closely

identified with the irrigation work in the valley. In the very early history of the irrigation congresses I attended several of them and have been delegated to go to Washington on four occasions to present matters concerning irrigation and land matters to the department and to the President. At at least one of those enterprises I took up this question of this treaty and discussed the matter very fully with the departments and the President. At another time I was there and took up the matter very thoroughly with the President as to the all-American canal. I presume our conference had much to do with the setting aside of a million dollars for the purpose of constructing an all-American irrigation canal. At that time I believe the Canadians had constructed, or were about to construct, the Canadian canal out of Milk River. I would say partly in reply to the gentlemen who represented the Canadian Pacific that while he seemed to think it was impossible for us to construct the all-American canal, I believe that if it had been necessary to do so that President Roosevelt would have insisted upon the construction of such a canal. He at least stated to me that he would, and I always had great confidence in what he said, although there are people who sometimes question his veracity.

At all events, I may say in this connection that I have been over the territory south of the Sweetgrass Hills, and I believe it is thoroughly feasible to build an all-American canal if it should be necessary to do so. It strikes me, however, that it would be folly on the part of the people of Canada or the people of the United States to undertake any such thing. It would cost us a great deal of money to do so, and it would serve no useful purpose, except that it would be able to irrigate a very large area of land south of the Sweetgrass Hills, and very desirable land, too. But at the present time it is not desirable to do so if we can acquire a right to take it through Canada, and that was the purpose of this treaty, as we understood it.

In the past 25 years I have been over the greater part of, or nearly all of, the territory comprising the Milk River Basin in the United States. I have also been in Canada, to the Milk River Canal and as far as Lethbridge, along the lines of the canal. I was there at one time with Mr. Savage, Mr. Magrath, and Mr. Grunsky. We happened to be there at the same time they were, and went on to Canada. At that time the treaty, I believe, was under consideration. I have also been over very many of the tributaries, and know considerable about the irrigation of the small ditches throughout this entire territory. I would say that it would be impossible to determine what is the flow of these streams, because these streams rise very suddenly and fall very suddenly. Very many of them are only dry coulees. The water flows for only a few hours, so it would be practically impossible to determine what the flow is. This is one reason why we supposed that no account whatever would be taken of the flow of water in any of the tributary streams in the Milk River that did not flow through Canada. This would be, as I said, so practically impossible that we never conceived that there could be any idea of attempting to measure the streams in the United States or determine what their flow was. It has been suggested that you could measure the streams at their mouths, but to determine what their flow is you would have to know what is taken out above, for in time the tributary streams could take all the water that flows in.

Therefore, if the interpretation of the treaty as contended for by my Canadian friend should be accepted, it would require the determination of the quantity of water that flows through these small tributary ditches, hundreds of them. It would be impossible.

As I said before, I was thoroughly familiar with the correspondence. As the secretary of the Upper Milk River Water Users' Association I was in touch with the Reclamation Service at all times. I was secretary of that association from the time it was organized in 1895 or 1896 until two years ago.

Mr. TAWNEY. You say you have lived out there for twenty-odd years?

Mr. SANDS. Twenty-five years.

Mr. TAWNEY. And that you are familiar with the situation in the valley of the Milk River and the valley of St. Mary River on both sides of the line?

Mr. SANDS. I am not familiar with the valley of the St. Mary River.

Mr. TAWNEY. During that time was there any controversy between the people of Canada and the United States in respect to the use of these waters?

Mr. SANDS. I would say there was.

Mr. TAWNEY. What was the nature of the controversy and what was the cause of it?

Mr. SANDS. We learned that a canal was being taken out of the Milk River near the crossing of what we call the narrow gauge, the Lethbridge line. We sent a man up there to make an investigation, and upon his return he told us of this canal.

Mr. TAWNEY. When was that?

Mr. SANDS. That was in 1903 or 1904. Upon learning of that we made representations to the State Department. I think I wrote a letter to the Indian agent at Fort Belknap to come and meet us.

Mr. TAWNEY. What amount of water was supposed to have been diverted by that canal?

Mr. SANDS. I was there, I think, in 1905, perhaps as late as 1906, and at that time the canal had never delivered any water, as I then understood it, across the divide; perhaps just enough to show that the ditch would run.

Mr. TAWNEY. So there was practically no diversion at all from Milk River?

Mr. SANDS. There had been no diversion.

Mr. TAWNEY. Up to that time what amount of water was being diverted from the United States side of the line?

Mr. SANDS. We were irrigating about 27,000 acres in the vicinity of Chinook and Harlem from the waters of the Milk River. The Indian Canal was diverting something like 50 or 60 cubic feet per second and covering perhaps some 8,000 acres.

Mr. TAWNEY. So far as the waters of the Milk River were concerned, there was practically no controversy between the people of Canada and the people of the United States prior to the making of this treaty?

Mr. SANDS. Not that I know of.

Mr. TAWNEY. If there was any controversy prior to that time, it was with respect to the diversion and use of the water of the St. Mary River and not of the Milk River?

Mr. SANDS. Yes, sir. There was a controversy which you might say did not reach us. We took no part in it, but we knew of the controversy respecting the St. Mary.

Mr. TAWNEY. But, so far as the Milk River was concerned, there was no controversy between the people of the United States and the people of Canada prior to the making of this treaty?

Mr. SANDS. No, sir.

Mr. WYVELL. Well, 1904 was spoken of, you know, by Mr. Dennis—

Mr. TAWNEY (interposing). Mr. Sands said they had information that there was a ditch or a diversion canal on the Milk River, and on investigation in 1906 it was found that there was practically no water being diverted. Then I asked him whether there was any controversy with respect to the waters of the Milk River, and he answered, "No."

Mr. SANDS. I will supplement that by saying that after the examination made by Mr. Evart and myself in 1905 we understood from an examination of the ditch that it was impracticable to carry water through that ditch, because of the fact that it passes along gravel beds, and from my knowledge of ditch construction I felt that it would not carry water without a very large expenditure of money in addition to what had already been expended, and while we knew it would be impossible to take out that water, we did not think it was likely that they would do so.

Mr. TAWNEY. My only purpose in asking these questions was with a view to locating, if possible, the fact, first, of any controversy between the people of the two countries and, secondly, the cause of such controversy. I wanted to find out whether the waters diverted from the Milk River prior to the making of this treaty were a source of controversy between the people of the two countries or whether it was confined to the waters of the St. Mary.

Mr. SANDS. We understood that it was almost wholly confined to the waters of the St. Mary River. We understood that the purpose of this treaty was to divide the St. Mary water.

Mr. MACINNES. Excuse me. Is it of any advantage to have this on the record? Certain things are understood.

Mr. TAWNEY. The understanding as to what the purpose of the treaty is is not material or competent. It is rather a matter for argument.

Mr. SANDS. Without wishing to argue the matter, I would like to say that I think the contract was made for us, and our understanding of the terms of the treaty ought to be an important part in the consideration of this question.

Mr. MIGNAULT. If there was no controversy, how could there be a contract made for you? You said that there was no controversy on the subject.

Mr. SANDS. The controversy was as to the St. Mary waters and the bringing of it through the canal. The understanding of the people in the Milk River Valley before the treaty was enacted and up to within a very few months was that the treaty related only to such waters as flow across the international boundary, and it came with great surprise that the Canadians expected to include in a division any portion of the waters which arise in the United States and do not flow across the line.

Mr. MIGNAULT. I suppose you have read the treaty, Mr. Sands?

Mr. SANDS. Yes, sir; I have had a copy in my office for several years and have read it and have never read it with any other understanding. You can see by reading it technically that there might be a different construction, but we took the whole treaty in its entirety and not with reference to one particular section and the peculiar wording of that one section.

Mr. MIGNAULT. How was an intimation given of the Canadian view of it?

Mr. SANDS. The first intimation was through Mr. Savage to me in Great Falls some time this last winter. The gentleman who represented the Canadian Pacific made the suggestion that they were very anxious to make an equitable division. I think the testimony shows here that the United States furnishes at least 80 per cent of the waters that cross the international boundary, and, to use an illustration that may be considered pert, I would say that they want us to furnish the apple or most of it and divide it equally with them, and if there is any rotten part they want to give us the rotten part. Or, to use the illustration of the mud pies that he used, they expect us to furnish 80 per cent of the water and divide the pies equally with them. We are willing to do it that far, but when it comes to adding perhaps 15 per cent more of the flow entirely within the United States we do not think that is right.

The witnesses on the part of Canada have frequently used the expression that they have not irrigated so much land in Canada. I just wish to call the attention of the commission to the fact that when interrogated as to the use of that term they state that by irrigation they mean lands that can be irrigated, so that there is a ditch somewhere near it or above it. When we refer to the term "irrigated" we mean water actually applied on the land, actually being used as irrigated land. I know of my knowledge, from examination of the records, that the Reclamation Service filed upon a large quantity, practically all the stream would carry, of the waters of the Milk River as early as 1903. I know that they commenced their work of surveys immediately afterwards and continued it diligently. I know that they made later filings in 1905, and even later they made other filings, and they have made recent filings, for that matter. I can see no purpose in it, although it costs but \$2. I do not know what their purpose might be.

Mr. TAWNEY. That phase of the subject has been gone over very thoroughly, Mr. Sands. You suggested yesterday or the day before that you had certain views with respect to how the commission should discharge its duty and perform the functions which the two Governments have committed to it with respect to the division and apportionment of these waters. It is the desire of the commission to conclude this hearing this afternoon, if possible, and while I do not wish to exclude you from any statement of facts as far as possible, yet you are simply going over the ground that has been gone over before. If you would confine yourself to the practical question which you foreshadowed in your remarks yesterday we would be very glad to hear you, because we appreciate the fact that you are familiar with the location and situation out there from personal knowledge, and that you have taken a great interest in the

matter. I would be glad personally, and so would the other members of the commission, to hear your practical views as to how the commission should discharge its functions.

Mr. MAGRATH. Take all the time you want, Mr. Sands.

Mr. MIGNAULT. We are not in any hurry, Mr. Sands, you can take all the time you want.

Mr. SANDS. Thank you, gentlemen, very much. I know there are appropriations which are dependent quite largely from streams flowing from the south. It is suggested by one witness, I do not know but that even one of our own witnesses said, that the streams from the north and south are practically the same. Well, gentlemen, from my own knowledge, I know that they are not. The streams from the south flow from the Bear Paw Mountains, which is quite a distinct chain of mountains, north into the Milk River. The Little Rockies are also a very pronounced and rugged mountain chain, but they are not so long as the Bear Paws. The Sweet Grass hills compare well with the Cypress Hills in Canada, but the waters from the Bear Paw Mountains constitute a very large portion of the water that flows into the Milk River, much larger than anything that comes in from the north, and the streams are very much steadier as the mountains have snow upon them until quite late in the season. The rainfall seems to be much heavier, especially in the Bear Paw Mountains, and there are many living streams from that source, whereas, the streams from the north are nearly all intermittent and usually dry up when the weather gets dry late in the summer.

I call attention to that especially because a contrary statement was made here, but I believe the physical facts and the data will bear me out in that fully. The streams that come from the south are far more important than those which come from the north.

Mr. MIGNAULT. Are these streams from the south more numerous than those from the north?

Mr. SANDS. Yes, sir; especially the streams from the Bear Paw Mountains. I suggested yesterday that I thought it would not be difficult to divide this water to the satisfaction of all the water users; not that they could get all they want, but I say to the satisfaction of all parties, to the end that the greatest use may be made and that the least damage might be done in case of dry weather.

I believe it would be satisfactory to a very large proportion of the people if two men, acquainted with the physical conditions, two good practical men, who have a lot of good common sense, were appointed, and I think they could divide that water to the satisfaction of the people. And in this way: Let them have a station; I will say at Chinook, because that would seem to be the most reasonable place. They would have to have telegraphic or telephonic communication with each of the measuring stations along the line; they would also be in communication with the streams that rise in the Bear Paw Mountains, because they are quite important and sometimes have a heavy flow; they could keep in touch with the whole basin of the two streams. There would be some seasons when there would be very little for these two men to do under present conditions, but as time goes by they would have to be more careful about

it. There would be times when there would be shortage; there would be now.

The Frenchman is used very largely by the Canadians; we use it very little; Battle Creek is used very largely by the Canadians, and we use it very little, except upon the land in the lower end of the stream, which can be reached from the St. Marys Canal system. On the other hand, Lodge Creek, as it is called now, is used quite extensively by the Americans, while not nearly as good a stream, the Canadians have no ditches there of any consequence, only one small one.

It would be proper to let the Americans have that and to discourage, as far as possible, the building of canals upon that stream by Canadians. The water, of course, from the St. Mary could be held back in cases where it floods; in the Milk River Valley it could be turned over, if the Canadians wanted that in their canals, through the Alberta Railway & Irrigation Co. canal. The water, as I regard it, that flows through the Canadian territory there, if we would turn it in, I do not think there would be any controversy over it. So that by the establishment of one station that is for the daily use along the railway there, perhaps, would be sufficient for present purposes. You would want a telephone system along the whole line, so that you could keep in touch with the stations at the east crossing and at the west crossing. But for the present purpose, there being no telephone line to the east crossing within 25 or 30 miles and there being no telephones to the west crossing within possibly the same distance, or even farther, I would suggest that if a gauging station be put at the crossing of the railway for temporary purposes you would have telegraphic communication through it.

Mr. TAWNEY. How far would that be from the boundary?

Mr. SANDS. Eight or ten miles; but it would be about the middle of the place, where the stream crosses from the west to the east. As was suggested by Mr. Newell, it seems to me it would serve no useful purpose for this commission to tie the hands of these two men at the present time. The two men on the ground can determine how that water can be divided far better than any six men sitting here, who have no experience in irrigation and who are not familiar with the physical conditions.

Mr. TAWNEY. If these two men were to report to the commission and the commission were to adopt their report and make the apportionment as they recommended, would there be any objection to that?

Mr. SANDS. No, sir.

Mr. TAWNEY. Under the treaty no two men can decide it. It is the commission who have power to make the apportionment. If two men, working under the direction of the commission, made a recommendation to the commission, and the recommendation was adopted by the commission and the commission gave them instructions to go out and make the apportionment as directed, that would be carrying out your idea of having two practical men in charge.

Mr. SANDS. Only, the difference would be that they would report what they had done instead of what they were going to do. This has to be done every day.

Mr. TAWNEY. That statement has been made quite frequently, and I may be more obtuse than the rest of you, but I do not understand

the necessity for these changes from day to day in the division of these waters.

Mr. SANDS. I can illustrate. For instance, on the 14th of this month the water in the Battle Creek was very short; there was not enough there; nobody had all he wanted. On that day there was a heavy rain, and there was then plenty and more than plenty for everybody upon that fork. On the other hand, the Milk River water did not come down, or, at all events, there was not a large quantity in Milk River, which was also nearly dry. There are canals above which would take naturally from the Milk River. The canals below the mouth of North Fork could take all of their water from the supply that came from the North Fork, which was more than the people of the North Fork could possibly use, so that the North Fork supplied the canals below, and the Belknap Canal would have all the Milk River water. A few days after that, perhaps, the Milk River would be high and the North Fork low, and we could see how the people on the North Fork could take the water and the Milk River people would get their supply from the Milk River water. Every day there would need to be a change, and if you wait for the commission to see what should be done you might as well have no treaty and no commission.

Mr. TAWNEY. I do not think such a thing is contemplated either by the treaty or by the commission.

Mr. POWELL. We could not move out to Montana and stay there all the time.

Mr. TAWNEY. Whoever the men may be who are directed by the commission, of course, they would be given discretion by the commission to adjust these matters from day to day as they may arise, but they would have to be under joint direction of the commission. The people living on these waters do not need to apprehend any difficulty about the commission making any fixed or fast rule with regard to the division of water that would not be sufficiently elastic to meet any condition that may arise from day to day.

Mr. MACINNES. I would call attention to the fact that the telephones and telegraphs are shown on the gauging stations map which we put in.

Mr. TAWNEY. Proceed, Mr. Sands.

Mr. SANDS. As I said before, for the present at least, I do not believe there need be, in most seasons and nearly every season, any controversy over the water; no great controversy, anyway. My knowledge of irrigation is that if land is irrigated early in the season, when we nearly always have water in the Milk River Valley from the running off of snow, for the irrigation of grain crops, and then save the later water for the irrigation of alfalfa fields, and use a little intelligence in that way, we need not suffer. As development increases and more land is brought in, greater care will have to be used in the distribution of the water, but at present it does not seem to me that there should be very much trouble if people will only try to be fair.

Mr. POWELL. Just in line with what you are saying, Senator Gardner and I were up there. We heard the statement made that the farmers were very backward, or rather that they delayed as long as possible, trusting to the rain, from incurring the expense of making

drafts upon the system, and in this way they injured the crops, whereas if they had applied in the early stage and got water the safety of the crops would be assured. Is that in line with what you are speaking of?

Mr. SANDS. That is possible; it is true to a certain extent. I think that greater care should be used in irrigation, and people could work more land with the same amount of water if they applied more care to it. I think that is probably true on both sides of the line. In regard to the law, Mr. Kelly made a statement, all of which I did not hear, and Mr. Gunn made a statement, also, and I hesitate very much to differ from them on the question of law which they submitted, but, at least, I can give my views of it.

I investigated the question thoroughly of riparian rights and have made an exhaustive treatise of it a few years ago, and I would say that the doctrine of riparian rights does exist in that State according to the supreme court of Montana decision. True, it is in a modified form, modified to this extent: The riparian ownership in common law belongs to the owner who owns land along the course of the stream. The supreme court of our State said that the riparian owner is one who lives in the valley, and that water for irrigation may not be taken out of the valley so long as that valley land is requiring irrigation. In other words, the valley lands are the riparian owner's and are entitled to the first right. I do not see how that question could arise here—I do not know why it was introduced here—but that is, as I understand it, the law, and I will furnish you with the proof if you require it on that point.

Mr. POWELL. I will take the illustration of a man having 100 acres fronting on the river and running back to the hills, and the hill land would be considered riparian land by your courts.

Mr. SANDS. Yes, sir.

Mr. POWELL. And in common law, if he sold off the front 100 feet, the front would be riparian land and the back would not?

Mr. SANDS. That is my understanding of it.

Mr. POWELL. So that they modified the common law by saying that it does not depend on the mere frontage?

Mr. SANDS. That is it.

Mr. POWELL. But it depends upon the land that can be served by that water?

Mr. SANDS. Yes, sir; in the valley.

Mr. POWELL. They have reverted to common sense.

Mr. SANDS. Whether right or wrong, the court held that, and it becomes important in this case in the view which I suppose counsel on the other side entertain in this respect: Both these lands in the Milk River Valley, which are irrigated from that stream, would be entitled to a right to that water, so that the 22,000 acres stated by Mr. Peters on the Canadian side that is riparian and can be irrigated is all that they could expect from that stream until all the lands in the valley are served. The same thing would be true of the St. Marys. He spoke of only a very small area that could be irrigated and which is riparian to the St. Marys stream.

Mr. MIGNAULT. The law in Canada is different.

Mr. SANDS. I do not know what the law is in Canada, nor do I know what the purpose was in introducing that matter, for I can

not see how it would have a bearing on this case. The case I refer to is the case of *Smith v. Dennis*, which was quoted by Mr. Gunn yesterday, but it does not uphold this contention. It is 60 Pacific Reports, 398. It is a Montana decision.

There is also one other thing which I myself deem unimportant, but so long as there are no pleadings in this case, and we do not know what the issues are, and Mr. MacInnes has dwelt on the question, I wish also to submit this other feature. I refer to *Bailey v. Tintinger*, which is a Montana case and was cited by Mr. Gunn, and which is to be found in volume 122 of the Pacific Reports, page 275. As the time is short I will only read the syllabi:

A right obtained under the statute providing for the appropriation of water may be lost by abandonment or nonuser for an unreasonable time.

The courts have decided that an unreasonable time would be 10 years, which is the statute of limitations in our country, and they have also gone further to say that the period may be much less, even as low as three years. I suggest this for the purpose of applying it in this case. Water was taken out of the Milk River Canal in 1904—over 10 years ago. Assuming, if you please, that it was taken out for a beneficial use, which probably the testimony would refute, then the beneficial purpose was simply to show that they could take it, and they had no other desire. But assuming it was for a beneficial purpose, the right would have been lost by this time on account of non-user, according to our Supreme Court decision. That has reference to the Milk River water site.

Mr. TAWNEY. Is that the canal you spoke of a little while ago which you investigated in 1904?

Mr. SANDS. Yes; and someone testified that no water has been run there since 1904. So that if Mr. MacInnes is attempting to base any argument in equity upon his rights, or upon an established water right, I feel that he must have lost that right, if he is going to rely upon Montana law, as he seemed to indicate that he would.

I wish also to call attention to the fact that Mr. Peters read a great many statements about what they could irrigate in Canada. Now, I know that the Government of the United States has refused many land patents in the Milk River basin, for the reason that there was not sufficient water to apply to the land, and therefore it could not be taken out under the desert-land act. I have no doubt it is true that there are large areas of land in Canada that could very properly be irrigated, especially at some time in the future. I do not see that there need be any contention on the part of anybody about these features of the case. There is land in Canada that can be irrigated, and there is certainly land on our side of the line that can be irrigated, and we can give specified areas if necessary.

The question of whether we had appropriated water for all that land becomes important. The gentlemen representing Canada used the word "grant"; they say that the right was "granted" at a certain date. That would correspond in our law to the time when the notice was filed claiming it, and we have filed notices that would far exceed the flow of the Milk River itself and all the tributaries of the Milk River. You can examine our records, and you will find that that is certainly true. I do not say all of the flow at flood season,

but all of the normal flow, and far more than the normal flow, because the normal flow in the irrigation season is sometimes very short.

Mr. POWELL. How does that affect the case before us?

Mr. SANDS. I do not see how it affects the case at all, but it was brought up by the other side.

Mr. POWELL. I have been waiting patiently for some days to find out how it bears on the case.

Mr. SANDS. I do not know, but so long as they offered that testimony, and without giving their purpose in offering it, I am suggesting that the same conditions exist on our side of the line. I quote again from the case of *Bailey v. Tintinger*:

The act of 1870 limited the right to appropriate water for irrigation purposes to persons or corporations having a title to or possession of agricultural lands. The provision was omitted from the acts of 1895 and 1897, and under the decisions the appropriator need not be the owner or in possession of the land nor make a valid appropriation for irrigation purposes. Our Constitution, article 3, paragraph 15, provides that the use of all water appropriated, or that may hereafter be appropriated, for sale, rental, distribution, or other beneficial purpose, shall be held to be a public use.

In other words, our Constitution provides that there must be a beneficial use. I suggest this in order to give the record of that canal out of Milk River which has been referred to so frequently. If they ever made a beneficial use the Constitution provides that it must be shown. No beneficial use was ever made from that canal, and therefore for this reason I claim no right was acquired.

Mr. POWELL. That canal was in Canada.

Mr. SANDS. Yes.

Mr. POWELL. Your legislation has a territorial limitation; no State or Federal authority presumably can legislate beyond its bounds.

Mr. SANDS. I do not think it can.

Mr. POWELL. And that would be determined by the Canadian law and not by your law.

Mr. SANDS. Yes; but there are no pleadings in this case, and I assume that because Mr. MacInnes introduced it he was trying to attempt to show a close relation between the two laws—that by equity they had acquired that right.

On the 19th of this month Mr. Jones, who is an expert at measuring water, and who has measured water for several years for the Reclamation Service, was appointed to examine the ditches in Canada in the Battle Creek and West Fork or Lodge Creek. He made a report which I would like to submit for your information. I do not know that it would conflict with the other testimony, but it is our view of the present conditions there.

Mr. TAWNEY. You can put it in the record.

(Statement submitted by Mr. Sands:)

REPORT ON DIVERSIONS FROM BATTLE CREEK, LODGE CREEK, AND FRENCHMAN CREEK IN CANADA.

BATTLE CREEK.

Badger's ditch.—Age, an old ditch. Area under the ditch, 80 acres. Capacity, 3 to 5 second-feet. Condition, probably only used during dry seasons; the dam was out and the ditch overgrown with grass. Not important.

Nash and Sterling ditch.—Age, built in 1910 or 1911, but enlarged and extended in 1914. Area under ditch, under old branch not over 640 acres; under

new branch perhaps 1,000 acres can be irrigated, but so far it has not been used. Mostly hay land. Capacity, probably actually carries about 15 to 20 second-feet; possible capacity of main ditch, 30 second-feet; of old branch, 20 second-feet; of new branch, 20 second-feet. Old branch leads to a reservoir covering 100 acres with a 15-foot dam, giving a depth of 12 feet at the dam. Probable capacity of reservoir 100 acres, 5 feet deep or 500 acre-feet. The reservoir was built last year and has not been filled. Condition, good; used somewhat this year.

Nash's ditch.—Age, old. Area under ditch, not over 40 acres. Capacity, 3 second-feet. Condition, fair; used a little this year. Not important.

Thomas's ditch.—Age, old. Area under ditch, 180 acres. Capacity, 3 second-feet. Not visited personally. Information from Mr. Richardson.

McKinnon and Reser.—Age, old ditch enlarged and repaired last year. Area under ditch, 50 per cent of 2,000 acres. Capacity, probably uses about 10 to 15 second-feet. Can carry 30 second-feet. Ditch can empty into a reservoir covering 160 acres with a 12 foot dam, giving an average depth of 4 feet or a capacity of 640 acre-feet.

Richardson's ditch.—Age, old. Area under ditch, 2,000 acres; probably irrigates 50 per cent. Capacity, uses 6 second-feet; can run 10 second-feet. Condition, fair.

Wilks Bros.' ditch.—Age, not yet completed. Area under ditch, 50 per cent of 400 acres. Capacity, 10 second-feet; probably will not use over 5 second-feet ordinarily.

Frank Henry's ditch.—Age, 4 years. Area under ditch, 200 acres. Capacity, not over 5 second-feet. Not visited. Information from Mr. Richardson.

Wilson ditch.—Age, old ditch. Area under ditch, 160 acres. Capacity, 3 second-feet. Not visited. Information from Mr. Richardson.

Gaff's ditch.—Age, 15 years. Area, 1,000 acres. Capacity, 20 second-feet; probably ordinarily carries about 10 second-feet. Condition, very good.

Marshall and Gaff ditch.—Marshall and Gaff take water out through the same ditch and then use separate ditches below. Age, 15 years. Area, Marshall has 500 acres, of which 300 have been irrigated; for Gaff's area, see description of Gaff's ditch. Capacity, very high if necessary, as it is an old slough used as a ditch; probably ordinarily does not run over 20 second-feet; in 1913 the maximum was 17 second-feet. Condition, good.

Patterson's ditch.—Age, not completed. Area, 50 per cent of three sections. Capacity, 10 second-feet.

Lindner's ditch.—Age, 18 years. Area, 300 acres of hay land. Capacity, 10 second-feet; can use 15 second-feet. Condition, good.

Spangler's ditch (from Battle Creek).—Age, rather old. Area, 50 per cent of 400 acres. Capacity, about 3 feet; can probably run 5. Not seen. Information from Mr. Richardson.

Cheesman ditch.—Age, old. Area, not very much. Capacity, 3 second-feet. Not seen. Information from Mr. Richardson. Not important.

LODGE CREEK.

This creek was not visited for lack of time. All information was obtained from Mr. Richardson, Mr. Nash, and the Battle Creek postmaster. Most of the ditches are small, as the creek is dry a large part of the year except for flood water. Middle Fork supplies most of the water during the irrigation season and most of the ditches take water from it.

Dan Hammond's ditch.—Age, new. Capacity, unknown. Area, 20 per cent of 300 acres.

R. S. Peachy.—Age, new. Area, 100 acres.

Mike Lynch.—Nothing known. Rather small.

William Gregg.—Age, 4 years. Area, 160 acres.

McKinnon Bros.—Flood system for hay land. Area, 600 acres.

Spangles Co. ditch.—Age, new. Area, 1,000 acres. Will develop a storage reservoir.

Wright's ditch.—Flood system for hay land. Area, 500 acres.

Joan ditch.—Age, 3 years. Area, three-fourths section.

Henry McCam ditch.—Age, 3 or 4 years. Area, 160 acres.

Anderson ditch.—Small and not important. Capacity and area not known.

All of these ditches, except Spangler's and Anderson's, take water from Middle Fork of Lodge Creek.

FRENCHMAN CREEK.

This creek was not visited and most of the information was obtained from the Canadian report. The banks are high and diversions are difficult, so there are very few ditches, according to Mr. Richardson.

Above the mouth of Fairwell Creek there are 393 acres under proposed or constructed ditches.

Strong & Day ditch.—Age, 4 or 5 years. Area, 2,581 acres. Capacity, ditch had a maximum discharge of 16 second-feet in 1913, but will probably carry 30 second-feet, if necessary. The company also has a system of small reservoirs.

Morrison Bros. and Duncan & Watson.—This ditch is taken out by Morrison Bros. and extended by Duncan & Watson. Age, 4 or 5 years. Area, Morrison Bros., 1,595 acres; Duncan & Watson, 935 acres; total, 2,530 acres. Capacity, in 1913 the maximum flow was 9 second-feet, but the ditch will probably carry 25 second-feet.

Besides these there are two small ditches above Strong & Day irrigating 200 acres.

SUMMARY.

BATTLE CREEK.

Area, 7,290 acres. Of this probably not over one-half is actually irrigated at present, and most of this is hay land.

Capacity.—The ditches, when completed, will ordinarily have a combined flow of about 99 second-feet; but if filled to overflowing they would have a combined capacity of at least 176 second-feet. The two main reservoirs have a combined capacity of about 1,140 acre-feet. Other small reservoirs might bring the total to 1,500 acre-feet. At present the total flow during June and July, except after rains, is taken by two ditches, Linder's and Gaff & Marshall's.

LODGE CREEK.

Area, 3,260 acres. Most of this is raw hay land, and the irrigation is largely flood irrigation.

Capacity.—Not known. Probably about 40 second-feet.

FRENCHMAN CREEK.

Area, 5,700 acres. This is probably very close to correct, as the estimate is made by the Canadian irrigation office.

Capacity. 55 second-feet. Probably more can be diverted by filling ditches to overflowing.

Storage, not much.

GENERAL DESCRIPTION.

The Canadian ditches, as a rule, are new, most of them having been constructed in the last four years. They are well built, with plenty of fall, and, as a rule, will carry much more water than is necessary to irrigate the land under them.

On Battle Creek the banks are low and diversions easy to make. As a result most of the flow has been appropriated, and no more filings are being allowed.

A plan of diverting Battle Creek into Cypress Lake and storing it has been suggested. This would probably affect even the flood flow of the stream, as most of the flow comes from above Battle Creek post office.

The flow at Battle Creek post office for seven months of 1913 was 20,000 acre-feet for a drainage area of 200 square miles. At Nash's ranch, 12 miles north of the boundary, it was 27,000 acre-feet for a drainage area of 500 square miles, and at Snedecor's ranch, 4 miles north of Chinook, it was 30,000 acre-feet for a drainage area of 1,400 square miles. If we leave out of consideration the flood flow of April, we find that practically all of the low-water flow comes from above Battle Creek post office, the discharge at the three points mentioned above being 7,800 acre-feet at Battle Creek post office, 7,100 acre-feet at Nash's ranch, and 9,700 acre-feet at Snedecor's ranch.

Lodge Creek is dry during the irrigation season except for a small flow in Middle Fork. As a result most of the irrigation is done by holding the flood water on the land in the spring, although there are several small ditches from

Middle Fork. There are a few small reservoirs, but the combined capacity will have no appreciable effect on the flood flow when most of the run-off in Lodge Creek occurs.

FRENCHMAN CREEK.

The banks of this stream are high and diversions are so difficult that it will be some time before the land is sufficiently valuable to justify the expense of any more diversion. These will necessarily be on a large scale, however, in order to justify the expense of a dam and getting the water up on the bench. Cypress Lake affords an ideal reservoir site.

Mr. SANDS. I wish to suggest that the testimony has shown that the United States produces or contributes 80 per cent of the waters that flow across the international boundary. By the terms of this treaty we give to the Canadians 58 per cent, which ought to be fair and ought to be all that they could possibly ask. If you give them what they contend for, the purpose of the treaty would be thwarted. It would be absurd to do anything of that kind. You might just as well say that you would limit it to the flow of the Milk River.

Mr. TAWNEY. If we were to give them what the treaty or the two Governments have agreed they should have, why do you say that is absurd?

Mr. SANDS. Yes, sir; in view of the terms of the treaty.

Mr. TAWNEY. I say, if we were to give them that which under the terms of the treaty they are entitled to, would that be absurd?

Mr. SANDS. No.

Mr. TAWNEY. The commission could not do anything else.

Mr. SANDS. I do not think so, but here is my contention: This treaty was for the purpose of determining the division of international waters, not the waters on one side exclusively, but all international waters. That is the whole purpose of the treaty.

Mr. TAWNEY. Both countries are entitled under this treaty to an equal division of the waters, whatever they are, that are included in the treaty.

Mr. SANDS. Yes, sir; that is true.

Mr. TAWNEY. And if there is any difference as to what waters are included in that treaty, or are to be included, that is a matter for the commission to determine.

Mr. SANDS. Yes, sir.

Mr. TAWNEY. I want to get your view of the legal question that was involved.

Mr. SANDS. Yes; but the terms of the treaty I think must be read with a view to the physical facts which were in the minds of the men who drew the treaty, and at the time the treaty was made.

Mr. GLENN. In construing these words "in the State of Montana and the Provinces of Alberta and Saskatchewan," your contention is, that only applies to international waters that cross the boundary?

Mr. SANDS. Yes, sir.

Mr. GLENN. And you say that their contention is that it not only applies to these but to waters that never have gone into Canada or that never have come into the United States.

Mr. SANDS. Yes, sir; I have ventured the opinion that the treaty power of the United States would not have the right to come into our State and take away from us, as you may say, rights which do not affect international questions. I think that the words used

there, "Montana, Saskatchewan, and Alberta," meant that these branches or tributaries in Montana, which flow north into Canada, or cross the line, were the tributaries in view of this treaty—only those which flow across from one country to the other.

Mr. POWELL. What words in the treaty do you interpret as giving that impression?

Mr. SANDS. I take the preamble first, which states the scope and the purpose of the treaty.

Mr. POWELL. Yes, but quote the words, what part of the preamble?

Mr. SANDS. The preamble says:

Whereas, a treaty between the United States of America and His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the seas, Emperor of India, to prevent disputes regarding the use of boundary waters—

Mr. POWELL. It says "boundary waters."

Mr. SANDS. Then they are waters which flow across the boundary.

Mr. POWELL. That is not a boundary water. The St. Croix River in New Brunswick is a boundary water, the St. Lawrence is a boundary river, clear through the Lakes, but these are not boundary waters.

Mr. SANDS. I would so construe it.

Mr. GLENN. Let me see if I understand your idea, Mr. Sands. Your idea is that any water rising in Canada and running into the United States, or rising in the United States and running into Canada, can be affected by a treaty between Great Britain and the United States?

Mr. SANDS. Yes.

Mr. GLENN. And that any water rising wholly in Canada or wholly in the United States, and remaining in either country, can not be affected by a treaty between two nations, because the State of Montana owns and controls; it has a State right in the water, and the Federal Government has nothing to do with it.

Mr. SANDS. That is my contention.

Mr. GLENN. In other words, you say that the Federal Government of the United States can not deprive the State of a river that rises within that State and flows through it and has nothing to do with the boundary line.

Mr. SANDS. Yes.

Mr. MIGNAULT. Have you any authority on that question, which is a very important one? You argue that the United States, so far as concerns that river wholly situated in Montana, has not the power to make this treaty.

Mr. SANDS. I have not been able to examine thoroughly into the question, as I live in only a small town and my private library is limited, and that, perhaps, would be a matter for Mr. Wyvell to deal with. I would also suggest that the title of this commission is given as the International Joint Commission; in other words, that it has reference only to international waters.

I would suggest this, further, that it seems absolutely unfair for the Canadians to make that claim, when this treaty was made to hold for only five years. I am not saying that we could set it aside or that we will, but I will say that if the construction claimed by the Canadians is admitted and should be acceded to by the commission, I think it only fair for the people of the Milk River Valley to

insist that it be abrogated as soon as possible. I do not say we could do so, but I feel we would try to do so if that construction were permitted.

Mr. POWELL. There is one point you ignore, and that is this, that nations at different times have put forward highly inconsistent and incompatible contentions.

Mr. SANDS. That is true.

Mr. POWELL. For instance, the United States claimed to be the owner, to have certain—not territorial rights—but certain rights of user of the River St. Lawrence to the ocean, and they put that forward, and also that they had the right to navigate it. They put the same thing forward in the case of the St. John River. Both of these rights were allowed, to a certain extent, afterwards by treaty. The English contention—and England has not always been consistent—has been that the two States may be exactly in the position of two riparian proprietors, and that there is what you may call a national easement that went as with the land of either, and what you call United States waters British jurists would say are waters which Canada has the right to have passed on to her undiminished in quantity and unpolluted in quality. That is their contention. The United States has put forward that contention sometimes, and sometimes it has put forward the other, and England's course is equally inconsistent. It is not conceded by Great Britain that the United States is giving anything to Canada. What Great Britain says is this: Canada is entitled to have the whole of the St. Marys River flow into Canada, and, inasmuch as that river enters into Canadian territory, it is the proprietor and owner of that water. In respect to the Milk River the case is somewhat different. Canada can not say the Milk River is hers. Why? Because its flow into Canada is diverted; it runs parallel for about 100 miles and then it crosses into the United States. It is a poor rule that will not work both ways. The United States can say to Great Britain: You must allow the Milk River to flow to us, just the same as we are willing to allow the St. Marys River to flow to you.

Mr. SANDS. I know of one instance in which the United States in a treaty with Mexico positively insisted they were entitled to all of the waters that rose on American soil.

Mr. POWELL. Do not understand me as committing myself to the principle I stated. I do not think international law has anything to do with this. It is a question of treaty, and the question as to what the two peoples have settled between them.

Mr. SANDS. That concludes my statement, so far as I remember. I would ask that if this question of the riparian rights becomes important, that I should have an opportunity of submitting a brief upon that question, in view of the point that has been raised.

Mr. WYVELL. You recollect the testimony of Mr. Dennis about the canal built on the Milk River?

Mr. SANDS. Yes.

Mr. WYVELL. And when that was constructed you and many other residents of the valley were alarmed?

Mr. SANDS. Yes, sir.

Mr. WYVELL. And you wrote certain letters to various people?

Mr. SANDS. Yes, sir.

Mr. WYVELL. And you wrote letters to Government officials?

Mr. SANDS. Yes, sir.

Mr. WYVELL. And in these letters you state something about the canal, the size, and so forth?

Mr. SANDS. Yes.

Mr. WYVELL. And you state that 18 steam shovels were working there?

Mr. SANDS. Yes, sir.

Mr. WYVELL. That was a question, of course, of friction arising about that situation?

Mr. SANDS. Yes, sir.

Mr. WYVELL. At which your people were alarmed?

Mr. SANDS. Yes, sir; but after we went up there and examined the canal we felt that it was not feasible for them to take water through it, that they would have to get it from some other source, and that it was put there for another purpose.

Mr. WYVELL. You didn't become so alarmed after that?

Mr. SANDS. No, sir.

Mr. WYVELL. Mr. Dennis said that in his judgment the canal could be put in operation.

Mr. SANDS. I believe he did.

Mr. MACINNES. Mr. Sands, do you suggest that this treaty is not binding upon the State of Montana or upon its inhabitants as to this Article VI?

Mr. SANDS. I do not say that. I mean to say that the treaty power of the United States does not extend to waters that rise wholly within the State of Montana and remain within the State. In other words, that they are not interstate waters and, therefore, that the nation has no right to deal with them.

Mr. MACINNES. Are you aware of the decision of the Supreme Court of the United States in *Howenstein v. Lynham* (100 U. S. Rep., p. 483)?

There can be no limitation on the power of the people of the United States. By their authority the State constitutions were made and by their authority the Constitution of the United States was established, and authority or power to change or abolish the State constitutions or to make them yield to the General Government and to treaties made by their authority. A treaty can not be the supreme law of the land, that is, of all the United States if any act of a State legislature can stand in its way. All treaties made or which shall be made under the authority of the United States shall be the supreme law of the land, and the judges in every State shall be bound thereby, anything in the Constitution or laws of any State to the contrary notwithstanding.

Mr. SANDS. I have not examined the authorities, but I believe there is room for a great deal of controversy over that question. I do not say it is the law, but, offhand, it is my conclusion that my contention is right.

Mr. MACINNES. Then there is the express language of the sixth article of your Constitution, which is referred to in this decision, with which you are familiar and which makes a declaration on the authority of the United States to make treaties. In the sixth article of your Constitution you have exact language bearing on this matter.

Mr. BIEN. The fundamental question is whether the subject of the treaty is one that is committed to the treaty power. That is a question that is a little different. If it were purely an international ques-

ion no State could do anything to interfere with the operation of a treaty, but the first question is whether the treaty is constitutional; that is, whether it touches questions that have not been committed to the Federal Government within the exercise of its powers.

Mr. SANDS. My theory is not that it is not constitutional, but if the Federal Government had no authority to treat on the subject both sides would be presumed to know, and would be presumed to know that in the enactment of this treaty the waters which were not international in their character were not included.

Mr. MIGNAULT. Has a treaty of the United States ever been set aside on the ground that it was unconstitutional?

Mr. BIEN. I believe that Mr. Wyvell has instances of that.

Mr. WYVELL. Treaties are the law of the land and are subject to interpretation like other statutes, and they may be declared unconstitutional. A treaty is considered by the United States Supreme Court in exactly the same way as a statute passed by Congress.

Mr. MIGNAULT. I wish to know if a treaty to which the United States was a party has ever been declared unconstitutional or ultra vires of the United States by the courts.

Mr. WYVELL. I am so familiar with the doctrine I have just stated that I can not cite any particular instance, but that doctrine that I have just stated has been laid down in several cases by the United States Supreme Court.

Mr. MIGNAULT. I understand that this contention which has been made by Mr. Sands is exceedingly important, and we should have some authority.

Mr. WYVELL. We are here in response to an invitation to help you discharge your duties, and I regard the point Mr. Sands has made as worthy of consideration when the proper time for consideration of it has arisen.

Mr. POWELL. Is there a distinction in any of your State courts recognized between a river that flows beyond the boundary line and a river that is entirely within the bounds of a State? Is one regarded to be under Federal jurisdiction and the other under State jurisdiction?

Mr. WYVELL. A river that flows from one State to another, if it is navigable, has certain national features with regard to navigation, and the courts have been very broad in saying what navigation means.

Mr. POWELL. But I had reference to the taking of waters, and that kind of thing.

Mr. WYVELL. On that I would not at the present moment give an opinion.

Mr. POWELL. The point that Mr. Sands makes might have a good deal in it in this way: if there was a distinction between the two in interpreting the general words of the statute; it might not apply to any river that is exclusively within a State.

Mr. WYVELL. A river that is exclusively within a State would have no feature to which the law of interstate commerce could be applied. It might be well to follow out that line of inquiry.

Mr. SANDS. The law of 1866 granted to the Pacific Coast States, or the arid States, the waters not navigable within the boundaries of each State.

Mr. POWELL. That would not exclude, or has it ever been construed as excluding, the waters that flow across the boundary line of a State.

Mr. SANDS. The *Kansas v. Colorado* case construed that to a limited extent at least, and held that the riparian owner in Kansas was entitled to a part of the waters which flowed down that stream, and that is, as I take it, that the rights existing between the States of the United States are very different from rights existing between two different nations.

Mr. POWELL. Still, does not your constitution look upon the States as being separate, independent sovereignties, so to speak?

Mr. SANDS. To a certain extent, but not where it is interstate.

Mr. MACINNES. Mr. Bien suggested that there might be limitation to the treaty-making power of the United States. I would like to ask where any such limitation might be found. I understand that Article II of the Constitution of the United States says that the President shall have the power, by and with the advice and consent of the Senate, to make treaties, provided two-thirds of the Senators present concur. There is also a further provision that no State shall enter into any treaty, alliance or confederation. Where, if at all, do you suggest, Mr. Bien, that the limitation of the treaty-making power contained in Article II is to be found.

Mr. SANDS. As I have said, I have not gone into the matter as fully as I would if the matter were before me to make a brief on it. I stated that that was my opinion and not that that was the law. All that you have read from, Mr. MacInnes, simply deals with the general treaty-making power of the United States. Whether that treaty power extends to matters not international in character is a question in my mind. The second section says simply that the State shall not make a treaty.

Mr. MIGNAULT. Would an extradition treaty be an example of a treaty overriding private rights or State rights?

Mr. SANDS. I would not think so, that would come within the police power of the Federal Government, and the police power is very different from civil rights, and it has been so held in our courts. I would say, in answer to your question, that the Federal power has undoubtedly the right to police this country, and if it is going to be an injury to the morals of the country they would undoubtedly have the right to exclude anyone from coming in, and they would have the right to enact such a treaty.

Mr. MIGNAULT. It is very important that we should have authority. We Canadians are under a disadvantage without having authorities cited, because when you state the principle and you do not refer us to an authority it is very difficult for us to make up our minds. The point which you have raised, Mr. Sands, is a very important point, and I think it should be supported by authorities, if there should be any.

Mr. SANDS. You will pardon me for not having come prepared with authorities, because we did not know what the issues would be, and, in fact, we do not know yet what they are.

Mr. POWELL. You have plenty of time to submit a brief or a factum.

Mr. MIGNAULT. You may submit a brief on the question, Mr. Sands.

Mr. POWELL. And when you are making one copy you might make six, one for each of us.

Mr. TAWNEY. Is that all, Mr. Sands?

Mr. SANDS. That is all I have to offer at the present time.

Mr. WYVELL. We have responded here, on the part of the Government of the United States, to furnish such information as may be possible to enable the commission to carry out its administrative duties of measuring and apportioning the waters to be used by the two countries on these lands. I do not know what you want to hear from me on the subject. If there is anything concerning the question of legal authority, I would want to submit a statement in writing.

Mr. TAWNEY. If there is anything you have to offer now or in writing in reference to the application of the facts brought out, you can submit it.

Mr. WYVELL. The course of the commission appears to us quite clear. The commission is granted administration duties, the commission has certain administrative duties; and may I say that, in my judgment, to the credit of our representatives, we have presented certain suggestions to enable the commission to carry out its administrative duties, namely, of apportioning the water to be used by each country from time to time. We have supplied all the information we could and we have made the suggestion as to what the commission should do to apportion the waters from time to time. The words "from time to time" are important. It is contemplated that the commission would direct the apportionment of these waters and measurements between the two, not that it would indulge in certain discussions of theory, but would actually take up the administrative duties and apportion the water to be used. I came here, having heard informally from the representatives of Canada, that there was a question of the interpretation of the treaty involved. At the earliest opportunity I had, for the information of the commission, I suggested the position of the United States with regard to the interpretation and with regard to the treaty. Up to date we have had no reply. Of course if our interpretation is controverted, it will be the beginning of the controversy, not the end, and it will be taken up in due diplomatic form and either submitted to this commission for decision in the future or submitted to The Hague tribunal.

I am willing to enter into a discussion of the legal features, for the information of the commission, of course, with the reservation contained in the words which I have already stated and with the reservation contained in any further statement that I may make on behalf of the United States Government.

Mr. TAWNEY. Mr. Wyvell, under the statement which you submitted the day before yesterday, you raise the question as to whether or not, acting under this treaty, the duty of the commission was to divide the waters of the Milk and St. Marys Rivers and their tributaries in Saskatchewan, Alberta, and Montana, including all the tributaries in these Provinces and the State of Montana; or whether the duty of the commission was limited to the two rivers and their tributaries that rise either in the Provinces of Canada or the State of Montana, and whose waters cross the boundary in their natural course. The grounds upon which that statement was made were not stated, and

I would be glad to hear you upon the grounds upon which you claim the duty of the commission is so restricted.

Mr. WYVELL. Subject to the reservation, so far as committing the Government is concerned, which I have made, and in a matter of such importance as this, as I may make in writing, the statement I now make not being in writing, not having prepared any, I shall very cheerfully and delightfully give to the commission my own construction of this treaty.

I wish to call attention to the first statement I made:

The first two sentences of the article lay down certain general principles of equality and division, the object being to secure a more beneficial use of the international waters.

Mr. TAWNEY. Will you read these two sentences that you refer to.

Mr. WYVELL. The first two sentences of Article VI read:

The high contracting parties agree that the St. Marys and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purpose of irrigation and power.

For some unknown reason, which I have not been able to ascertain, no one seems to have brought out with any emphasis that the object of the treaty was not the theoretical object of simply looking at these waters and saying so many are on this side and so many on that, or dividing any waters that could not be physically divided, but they were treated as one stream for the purpose of irrigation and power only. When you read that part of the treaty in connection with the waters to be used by each country, you will see plainly that the duties of this commission are of the highest order of actually providing for practical things and applying the water which each country says is to be used, to the land—I place emphasis on the words—for the purposes of irrigation and power:

and the waters thereof shall be apportioned equally between the two countries, but in making such equal apportionment more than half may be taken from one river and less than half from the other, by either country, so as to afford more beneficial use to each. It is further agreed that in the division of such waters during the irrigation season, between the 1st of April and 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of St. Marys River, or so much of such amount as constitutes three-fourths of its natural flow.

These are the principles by which the waters to be used by each country are to be divided, when the developments by each country reach that stage of completion that either one will approach the maximum amount to which it is entitled. If you want to wander from that point and indulge in a discussion of how these principles shall be applied, when perhaps 50 years, or 100 years, or 200 years from now each country will be in a condition to use the maximum amount of waters which are to be applied, I shall be pleased to go on with a discussion of that question.

As to the fundamental principle of international law, Chief Justice Marshall laid down the rule over 100 years ago:

That the jurisdiction of a nation within its own territory is necessarily exclusive and absolute; it is susceptible of no limitation not imposed by itself. Any restriction upon it derived from an external source would imply a diminution of its sovereignty to the extent of the restriction and the investment of the

sovereignty to the same extent in that power which could impose such restriction. The exceptions, therefore, to the full and complete power of a nation within its own territory must be traced up to the consent of the nation itself.

That principle of international law has been repeated constantly by the Supreme Court of the United States, and it is repeated in substance in this very treaty itself. I cite from Article II:

Each of the high contracting parties reserves to itself, or to the several State governments on the one side and the Dominion or Provincial governments on the other, as the case may be, subject to any treaty provisions now existing with respect thereto, the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into boundary waters—

Mr. POWELL. The sting is in the tail of it; read on.

Mr. WYVELL. I had intended to do so.

but it is agreed that any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs, but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto.

It is true that in this treaty the parties did limit their sovereignty. I want to emphasize the fundamental principle of international law, which has been quoted by Mr. Attorney General Harmon, merely to bring out the other important rule of international law, which all the text writers have adhered to, and which has likewise been affirmed repeatedly by the Supreme Court of the United States—that the limitation upon the authority of a nation must be construed strictly, and that that interpretation of a treaty is preferred which imposes the least restriction upon the sovereignty of a nation. So that the interpretation of this treaty is to be preferred which imposes the least restriction upon the sovereignty of either nation.

Mr. POWELL. Referring to these words:

But it is agreed that any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary.

This clause has always bothered me a good deal, and at first reading the words seem to point against your argument. Injury is a legal term. We know what it means; it means damage, in the eyes of the law. If the United States or if Canada had the absolute right to cut off and divert, for its own purposes, a stream which crossed the boundary, would it recognize that it was an injury and make provision, not only as regards the injury but the damnum, and make provision how the damnum is to be based. The treaty recognizes that that is a legal wrong.

Mr. WYVELL. The treaty-making powers would have the right to do what they want to do with regard to that.

Mr. POWELL. There is no doubt about that, but while they have that right they stipulate there that they must pay for any injury.

Mr. WYVELL. Certainly; it prescribes how the remedy is to be worked out.

Mr. POWELL. But it recognizes it as a legal wrong, and that has always bothered me. I can not see how the United States authority

ever could get in there, with respect to a matter like that, but it is there.

Mr. WYVELL. Great Britain has asserted the same rule that we have been contending for, and she has asserted the same rule in this case.

Mr. TAWNEY. Is it not a fact that in adopting this section of Article II, Great Britain and the United States have done what no two other nations in the world have ever done before, that is, to recognize not only the right to recover damages from the citizens of the other country, but also to give to the citizen in a country who has sustained the damage the right to sue in the jurisdiction of the other country for the purpose of recovering compensation for that damage?

Mr. WYVELL. They have been very honorable about it.

Mr. TAWNEY. This is the first time in the history of treaty-making where one nation has conceded to the citizens of the other the right of maintaining action in the courts of the other country for the purpose of recovering damages on account of any act that may be committed in the other country.

Mr. WYVELL. I presume that may be so.

Mr. SANDS. Was there not a consideration passed for that agreement?

Mr. TAWNEY. Nothing except amity and good feeling.

Mr. WYVELL. That was the right thing to do morally; there is no question about that.

It may be illuminative if I read what Mr. Hall, a great English writer on international law, has said on this subject in discussing the question of rivers, and no doubt Mr. Powell is very familiar with this work. On pages 139 and 140, W. E. Hall, Sixth Edition International Law, he discusses with a good deal of detail all of these questions of rivers flowing from one country to another, the Elbe, the Rhine, and the St. Lawrence, because it was a subject of discussion between the Governments in 1824, and he says:

A marked tendency has no doubt shown itself during the present century to do away with prohibition or to lessen restrictions of river navigation by foreigners, as a needless embarrassment to trade, but this has been the result, not of obedience to law, but of enlightened policy; and it may be said without hesitation that so far as the law is concerned a State may close or open its rivers at will; that it may tax and regulate transit over them as it chooses, and that though it would be wrong in a moral sense, as it would generally be foolish, to use these powers needlessly or in an arbitrary manner, it is morally as well as legally permissible to retain them, so as to be able when necessary to exercise pressure by their means or so as to have something against concessions by another power.

He is there discussing, of course, only river navigation, but it is much more equitable that a navigable river should be kept open than one which is not navigable.

Mr. POWELL. Would you draw a distinction between continuing natural conditions and imposing artificial burdens? For instance, a ship navigating a river is an artificial thing. Would you draw a distinction between water flowing down a river in its ordinary course of nature and a ship navigating that river?

Mr. WYVELL. If a State exercises unreasonable restriction over a navigable river to interfere with trade, it would be a greater wrong

in a moral sense, as he says, and a greater injury to other people, than if the river were not navigable.

Mr. GLENN. Speaking for myself, I would like you, Mr. Wyvell and Mr. MacInness, to discuss this matter from these two aspects: first, as a matter of fact, taking the treaty as it is, with all the circumstances and facts surrounding this case, what evidence have you got that in this treaty the high contracting parties agree that the St. Mary and the Milk River and their tributaries are to be considered; what facts bear out the contention that it was never intended that a river that did not go across the international line should be included in that treaty? In the second place, if the Government of the United States did make such a treaty and included all these rivers, what right had it to do so?

Mr. WYVELL. The first fact is that there was a specific proposition that the United States proposed to divert water from the St. Marys River to the Milk River, and Canada objected and filed a protest, which was referred to by Mr. MacInnes, and to which further reference was made by myself. We asserted, we asserted to the credit of the United States, that while we intended to divert some of the water we did intend to allow enough water to pass that river to take care of all Canadian needs. That is contained in one of the letters of Secretary Hay.

Mr. SANDS. Which was then appropriated.

Mr. WYVELL. Yes; that was set out plainly, and then you will remember that Mr. Dennis, the virile gentleman from Canada, was not satisfied with that, and, as he frankly stated, he proposed to show the Americans that they could deal with the water the United States was going to send in there, and then he built that ditch for the express purpose of taking out the water which we put in, in the head waters of the Milk River. Therefore, he had the specific object in mind of diverting the water from the Milk River at that spot, and that was all the water he could divert.

There was not a single thing in issue about any tributary of the St. Marys River, of which there are only two that contribute any water to the St. Marys River, which do not flow across the line, and the subject was never discussed for one moment, nor of any of the tributaries of the Milk River south in Montana, which do not cross the boundary. They were trying to get a treaty which would cure a specific thing, and apply an equitable arrangement to the division of waters, and the southern tributaries to the Milk River was never in their heads, and if you want any further evidence of it what better evidence is there than the significant telegram that was sent. The United States never discussed any such thing from 1902 until 1909, and in 1909, on the 9th day of January, when the treaty had been under discussion for eight or nine years, the Canadians suddenly thought of the word "Saskatchewan." The word "Saskatchewan" was not in any of the drafts or in any of the papers which passed before that. You had the Province of Alberta and the State of Montana, but the word "Saskatchewan" never appeared. If Saskatchewan were omitted, would any of you gentlemen even dignify the suggestion with a moment's thought that the streams flowing from southern Montana would be a part of this treaty? Why, certainly not. But Canada suggested the word "Saskatchewan"

two days before the signing of the treaty. Mr. Chandler Anderson, seeing that there were a few northerly tributaries of the Milk, without knowing their importance, thought that the United States ought to accept the waters which it receives from these tributaries that come from Canada, and he consented to the word "Saskatchewan." Do you mean to think for a moment that the insertion of the word "Saskatchewan" suddenly brought into the purview of the treaty, without previous discussion, would include tributaries from the southern part of Montana?

Mr. TAWNEY. Do you mean to say that the representatives of the Government of the United States, who made this treaty, did not know that these tributaries were in the south of Montana?

Mr. WYVELL. Certainly they knew they were.

Mr. TAWNEY. If they knew they were there why did they not except them?

Mr. WYVELL. Let us go back to that thought. You doubtless know that the original plan of the settlement of this difficulty was a separate treaty. As time wore on the difficulties of getting a separate treaty were increased. Other features of the international situation were coming on, and it was decided to put this question about the Milk and St. Mary Rivers in the waterways treaty, creating the International Joint Commission. They were obliged to make the reference to this matter in the treaty as brief as possible, and you will see if you examine the drafts they cover a matter of three or four pages in the drafts, but the whole thing is finally condensed into a very short space in the treaty here, and many things are left out which eventually might need additional light. There is this further fact that in every single draft the idea of international waters appears, and that Secretary Root's letter says: "The waters which cross the international boundary." There is no question about that. Even the drafts submitted by Mr. Campbell for Canada and by Mr. King for Canada state that it is a question of boundary waters.

Why, as you get into this thing, and the more you think it over, you will see there are circumstances surrounding it which prove that it is absurd to think of trying to divide that which in nature you can not divide. This is a practical proposition. How are you ever going to give Canada any of the water from the tributaries of southern Montana? How are you going to give America water from two of the tributaries which flow into the St. Mary River and which contribute 6,000 acre-feet to the St. Mary River? This is a practical proposition; it is not a question of indulging in theories; it is a question of applying that water to the land. The treaty says that you gentlemen are to do it from time to time, to measure and apportion from time to time the waters which can be used, and that is your duty here.

I have been studying this thing a long time, and you gentlemen have been thinking about it, but the more you study it the more clear will your view become and the more you will see the possibilities for assisting the two Governments.

Mr. POWELL. There is one feature to which I would like to call your attention. What you say about the introduction of "Saskatchewan" strikes me as having a good deal in it, but how about this feature: These early drafts, as you say, did deal with dividing the

waters that cross the boundary line. Now, when that use of language has been followed in all the drafts, and we find it utterly abandoned in the final draft and in the treaty, would that not rather indicate that the treaty makers gave up the old idea and took something different in its place?

Mr. WYVELL. No indeed, rather would it indicate that it was so absurd to consider anything else that in the interest of brevity it was left out.

Mr. POWELL. When did this light from heaven let in on their minds, because they must have been very obtuse in the first place to draft such language. Mr. Root is one of the brightest intellects in the world, and he used it in the treaty, and he used it in the drafts, and it is referred to again and again, and in the end they abandoned that language and adopted general language, and instead of having rivers and tributaries that cross the boundary line they dealt with another thing.

Mr. WYVELL. The evidence is that there never was any thought in their minds but of international waters. Mr. Newell, who, as you know, is an excellent citizen, worked on the draft of the treaty all this time with Mr. Anderson and other gentlemen on both sides, and they never in one single instance gave the other idea a thought, and is it reasonable to suppose they would change it without discussion?

Mr. POWELL. But they did change it. Why should they change the language unless they changed the thought? If the old language expresses definitely and clearly the idea which you are putting forward, and which it certainly does, why did they abandon the limitation and use general language?

Mr. WYVELL. I have a statement of Mr. Anderson which I have not read into the record, because I thought if you needed the assistance of Mr. Anderson or anyone else connected with the making of the treaty you could call them. You have been so good as to accept everything that either of us thought might enlighten you that I thought it hardly proper to read this statement from Mr. Anderson, as he was not here. It would be perfectly proper for the commission, if they think that subject will be of assistance to them, to call Mr. Anderson and Mr. Newell and Mr. King and any of the gentlemen connected with the making of the treaty and ask them what was in their minds at the time the treaty was finally settled. There is no objection to that. I do not know anything about it personally. I know that Mr. Anderson says in his statement, which is not in the record, that it was never even suggested, and that it was left out to make the treaty as brief as possible. If you want further information on that, why not call them?

Mr. BIEN. I would suggest one thing. It is said that the thought has been changed and the language in the treaty used. Without going into an extended discussion, I would like to suggest that there would have been a different thought if the parenthetical clause had read "in the State of Montana or the Province of Alberta or 'Saskatchewan.'" The word "or" would have a very important effect there, and in considering what the clause means it is necessary to consider what the force of that word is. We are speaking of these two river systems in the State of Montana and in the two Provinces,

and it means the waters that lie on one side and on the other of the boundary; whereas, if they had intended to include all the tributaries of the Milk River in Montana, the proper word to use would have been the word "or" and not the word "and."

Mr. WYVELL. However that may be, I have tried to cover the ground presented in the discussion. Without desiring to prolong the discussion I will go to another part, because without question the treaty was made to correct a certain evil. Again do I want to emphasize that these two rivers are not to be treated as two rivers and the waters divided as a matter of theoretical discussion or as a matter of argument. They are to be treated as one stream for the purpose of irrigation and power, and the waters to be used are for the purpose of irrigation and power. These words "irrigation and power" stand out clearly and distinctly.

Mr. GLENN. Would these streams north of the line and these streams south of the line be used for that purpose?

Mr. WYVELL. Mr. Peters said—and I compliment the young man—that they had no plans to use the waters of the St. Mary River below Kimball.

Mr. GLENN. Could it not be used for power?

Mr. WYVELL. Mr. Peters stated in the next breath that it could be used for power in the summertime when they did not need it for irrigation. He stated in his verbal statement—and I was glad to hear him make the frank statement—that conditions were such that they had no plans to use the water for power.

Are you gentlemen going to attempt to divide waters below the Kimball Canal, which can not in the remote future be used for irrigation and which can not be used for power, and to match these waters up against the sudden flood waters down in Montana which can not be used for irrigation and can not be used for power instead of turning your attention to the administrative features here and apportioning the waters that are to be used upon the lands by each country? That is what your duties are, and they are most important.

The treaty says that you are to measure and apportion the waters from time to time. How are you going to measure and apportion waters which escape to the Missouri or Belly Rivers? The treaty says you are to measure these waters which are to be used. How can you apportion and measure waters which escape and can not be used?

Mr. TAWNEY. It is supposed that the waters to be used will increase from year to year.

Mr. WYVELL. That is what the treaty contemplates, and your measurements from time to time will enlighten you as to what you are to do. The words "from time to time" are important. This treaty is not a theory for you gentlemen to work out; it is a practical thing, and under it we want you to help the two countries. That is what the United States wants you to do. We want you to help the two countries. We have suggested how you could do it. The words "measure and apportion the waters from time to time" stand out clearly in the treaty.

It may be that I shall ask to submit remarks on these different points in writing. We have made a candid statement here first on the principle of maximum amount to which each country may be entitled. We then suggested certain things which you might do at

this time. So far from the lips of the other side there has been no discussion of the treaty.

I have made a candid statement of what the United States' position should be. If this position is controverted, then the discussion begins, not ends, and it will come to diplomatic negotiations.

Mr. TAWNEY. Why do you say that it begins and not ends?

Mr. WYVELL. As to the construction of the treaty, it begins.

Mr. TAWNEY. Has not the commission power to determine the controversy? If the position of our Government is controverted on the other side, I understand you to say that would be the beginning of diplomatic negotiations between the two countries for the purpose of interpreting the treaty. Then, that would, of course, preclude from this commission the power to perform its duty under this treaty. Is that your contention?

Mr. WYVELL. No; the duty of the commission is clear, to apportion the waters which are to be used.

Mr. TAWNEY. Is it not within the power of the commission to interpret the treaty with respect to the duty which the two Governments have imposed upon the commission?

Mr. WYVELL. You are aware, Mr. Chairman, that Article I of the treaty with Great Britain states that there shall be referred to The Hague difficulties which may arise relating to the interpretation of treaties existing between the contracting parties and which it may not have been found possible, etc.

Mr. TAWNEY. I am aware of that, but this is a subsequent treaty and refers to a specific thing.

Mr. WYVELL. If it were referred to the commission, as would probably be done, certainly; but it would have to be on issues presented and not on an informal hearing instituted by the commission itself.

Mr. TAWNEY. Under this treaty this commission may determine any question or difference between the parties; do you say that differences on questions of law and questions of fact would have to go to The Hague? I do not wish to interrupt you, but it seems to me as testing the validity of your conclusions in other respects, a very remarkable position for you to take—that we would not have the power to determine under this treaty just what our duty was in the premises.

Mr. WYVELL. Would you suggest how, under present conditions, you could measure and apportion waters—

Mr. TAWNEY. We will render our decision as to how these waters can be measured and apportioned, as we have been given power to do by both countries.

Mr. WYVELL. I would say that the decision of the Solicitor and every legal officer in the State Department is, that under Article IX or other articles of the treaty you have the power to decide things which are referred to you.

Mr. TAWNEY. We have no power to decide under Article IX.

Mr. WYVELL. Well, I included the other articles.

Mr. TAWNEY. Under Articles III, IV, VIII, and X we have the power.

Mr. WYVELL. You have the power to decide anything which may be referred for decision or report to you, but you can read this

treaty through and you can not find anything in Article VI which gives you any power to interpret.

Mr. GLENN. Do you mean to say that we have not the power under Article VI to say whether the tributaries south and north which do not cross the line are intended to be included in this?

Mr. WYVELL. That matter is so important that I would like to submit in writing my position. I think, in order that my statement may be accurate, that I must have some time to put it in writing.

Mr. GLENN. I am frank to tell you that I think we have all the power we need to do that. We have power to decide. As to how we will decide, that is another thing.

Mr. WYVELL. Well, that, as I say, I would prefer to place in writing. I assume that you gentlemen will want to give it some consideration.

Mr. POWELL. Although the old treaty is antecedent to this present treaty, you claim that inasmuch as the laws of both countries will be taken as always speaking, the old treaty will govern?

Mr. WYVELL. Of course, it really is not antecedent; it is subsequent, because it was reratified and revived last spring. It was extended for a period of five years longer which made it a new treaty for five years.

Mr. POWELL. Then it was in force before our treaty.

Mr. WYVELL. It was in force before our treaty, and then established again by the exchange of ratifications. But that matter I would prefer to submit in writing in order that it may be clear. Of course, the commission could hardly question the plain words of the last paragraph, where it refers to the measurement and apportionment of the water to be used. We would contend that waters which are not to be used by the two Governments are not within the intention of the parties. You can not follow the waters down the Missouri and be able to apply them to the benefit of Canada. It is waters which the Government says it intends to use and apply to the lands. These are the waters to be divided, and may I add further that I hope you do not assume that even if you had the power to decide the treaty you would consider this hearing as a framing of issues. If this is a matter to be submitted, I shall urge that it be submitted to the tribunal regardless of The Hague tribunal, but then, of course, it should be limited to framed issues and the parties outside, the Canadian Pacific Railway and the Great Northern Railway, I suppose, would not appear. It would be an issue between the two Governments respectively.

Mr. SANDS. The purpose of this treaty was to provide for a division of the St. Mary waters so that we Americans could bring water across into the Milk River. The testimony here shows that the flow of the two streams are practically the same. Therefore, the purpose of the treaty was wholly subversive and there would be no use in building a canal from the St. Mary River into the Milk River because we would not have any water to put into it.

Mr. TAWNEY. Mr. Wyvell, have you concluded your statement?

Mr. WYVELL. Yes, sir; unless there are some other questions that the commissioners wish to ask.

Mr. POWELL. There are three or four questions that arise there. For instance, the C. P. R. have a contention that the 500 feet of prior

appropriation was the minimum to which Canada was entitled, that it stored that 500 feet and went up as far as the three-quarters would give them, and the same thing vice versa as regards the United States and the Milk River.

Mr. WYVELL. Did Mr. Dennis testify to that?

Mr. POWELL. No; but that is one of the contentions.

Mr. WALKER. I think you have misapprehended the position of the company. No such interpretation was ever intended to be placed on it.

Mr. POWELL. Was not the contention made by the company that it was entitled to 500 feet absolutely?

Mr. WALKER. But not that it consented.

Mr. POWELL. Well, take the contention with respect to the 500 feet. If you will look again and keep the treaty before your minds, you will find that other questions arise. For instance, in the case of prior appropriation, is that prior appropriation to be a part of the one-half, or before they divide into moieties does the United States take its prior appropriation and then divide equally the balance? Now, there is a third construction which may arise. Is the dominating language of the statute that sentence relating to prior appropriation? After you have made it to each have you got to go to work and marshal the balance so as to bring it out as nearly as possible to giving one a moiety of the sum total?

Mr. WYVELL. I had not heard anyone raise the point here.

Mr. TAWNEY. Those are questions which suggest themselves in the exercise of the functions which the two Governments require of the commission. If there are any differences of opinion, I suppose those differences will have to go to The Hague with the others.

Mr. WYVELL. The second sentence of Article VI reads as follows:

It is further agreed that in the division of such waters during the irrigation season, between the 1st of April and the 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of St. Mary River, or so much of such amount as constitutes three-fourths of its natural flow.

For the information of the commission I will be pleased to state that it is the belief of the United States that this reference to prior appropriations means that each country is entitled to first call on 500 cubic feet per second, or so much of said amount as constitutes three-fourths of the natural flow of the rivers, respectively, and that the amount actually received by each country shall be charged against it in making the final division.

The first sentence of this article clearly states that the waters of the two rivers shall be apportioned equally. This equal apportionment is controlling, and the prior appropriations are merely certain fixed preferences to be taken out of each country's share and affords one illustration of how more than one-half of the water may be taken from one river and more than half from the other. It first says that they shall be apportioned equally. Here is one way in which that must be done. This question of whether the appropriations are to be taken out first and the remainder divided, or whether they are a part of the one-half share of each country, can not arise

until one of the countries is ready to apply to beneficial use the maximum one-half share to which it is entitled.

Now, the further suggestion I will anticipate. It was made in your report as to what the three-fourths means. There is still another thought in there. That is, assuming the flow to be 500 feet or less, what part would each country get? On that it is our belief, and I believe that of the gentlemen from Canada, that whenever the flow is 500 feet or less each country gets three-fourths of it; that whenever the flow is 667 feet or more each country gets its 500 second-feet, and, of course, the remainder is to be distributed under the general terms of the treaty; and that whenever the flow is between 500 feet and the 667 feet each country, respectively, continues to get its three-fourths share.

Mr. POWELL. Your memorandum there sets the two forth, but it does not state to which they are attached.

Mr. WYVELL. That prior appropriation furnishes one way of how more than one-half may be taken and states that it is to be ultimately charged against the maximum one-half share of the country which receives it.

Mr. POWELL. That is to be taken out of the half that that country receives?

Mr. WYVELL. It is to be a part of the half.

Mr. SANDS. Illustrate a thousand feet, and suggest what your idea is.

Mr. WYVELL. No. Mr. Powell means a half of the larger.

Mr. POWELL. Let us take a summer flow, which would tolerably approximate the average state of affairs. Let us suppose that in the St. Mary River there is a flow of 400 second-feet. Canada, under the terms of the treaty, would be entitled to a prior appropriation of 300 feet. There is 100 feet left of surplus. The Milk River about that time, under those circumstances, would not have more than 100 feet. The United States would be entitled to a prior appropriation of 75 feet, and there would be a surplus there of 25 feet. Now, if Canada gets 300 feet and the United States gets 75 feet from the rivers respectively, there is a surplus in the St. Mary River of 100 feet and a surplus in the other river of 25 feet. Are those two surpluses to be added, making 125 feet, and that dividend, giving each $62\frac{1}{2}$ second-feet, or is the United States to have the surplus of 25 feet to help it out and also the 100 feet, which would give it a total of 200 feet?

Mr. WYVELL. Our idea is that that surplus should be put together.

Mr. POWELL. We have not to wait indefinitely in the future for that state of affairs, because that is transpiring there to-day. The flow is bigger to-day, but it was there when we were there in July last. So we have to deal with that practical question now.

Mr. WYVELL. Of course, they could take that if they wanted to take water.

Mr. POWELL. Well, they are going to be ready this next year.

Mr. WYVELL. My belief is, if I understand your figures, that the 300 feet which Canada would be entitled to must be set on one side of a balance sheet.

Mr. POWELL. In the case put of a flow of 100 feet from the Milk and 400 feet from the St. Mary, Canada is entitled to have 300 feet set aside from the St. Mary River, and the United States will be entitled to have 75 feet set aside from the Milk River.

Mr. WYVELL. If our Government should take the 100 feet, we will say, that we will be entitled to from the St. Mary and then Canada should take its 25 which it would be entitled to from the Milk River, we will have on the balance sheet then 325 cubic feet per second on the one side and 175 cubic feet per second on the other. Those two figures should be left there and ultimately each respectively should be charged against the total one-half; in other words, a part of the one-half.

Mr. POWELL. Under those circumstances it is absolutely impossible to give the prior appropriations as you have stated and still give each one-half. That is beyond the capability of even the Almighty. You have 200 feet. You say we will allow Canada to have a prior appropriation of 300 feet. What is the use of talking about the final disposition of the thing, because Canada has grabbed the 300, which is more than half to start with.

Mr. WYVELL. We must then deal with the 125. If the United States demands it, give her the 100 out of the St. Mary. If Canada demands it, she must have the 25 out of the Milk.

Mr. POWELL. I am against you on that in favor of the United States.

Mr. MIGNAULT. That would not be fair to the United States.

Mr. WYVELL. As I understand your illustration, there is flowing 100 feet down the Milk River. The United States is entitled to 75 feet.

Mr. POWELL. Canada is not entitled to the other 25. That is a matter of marshaling and division afterwards. There are only two views that are before us. According to one view you should take these prior appropriations before you begin your equitable division at all, add the two surpluses together, which make 125 feet, and divide that amount. The other way is to say that while we must set aside the prior appropriations, yet the dominating principle is equality, and we must reach that as closely as possible. The nearest approach that we can make to that is to throw to the United States the whole 125 of the surplus, which, after all, gives them 200 and gives Canada 300.

Mr. WYVELL. That might be proper. That throws in an additional thought. That further illustrates how the two men who are watching the situation would throw that 125 feet.

Mr. POWELL. We want to know on what principle this is going to be done.

Mr. WYVELL. I assume that that would be a matter of discretion, because the commission can not be there every day, and I assume that these men are going to do whichever is best for each country under that situation.

Mr. POWELL. We want you to argue that before us.

Mr. WYVELL. I would have to take more time on a subject of that kind.

Mr. MIGNAULT. I would suggest to you, Mr. Wyvell, that your line of argument should be this: That the prior appropriations are debts which each country owes to its citizens. The debts which each country had with regard to its own citizens were recognized in the treaty, the division, however, to be equal to the entire quantity. However, I do not state that as my view.

Mr. WYVELL. Mr. Powell put a case where, of course, neither river was flowing 500 second-feet.

Mr. POWELL. That would be the case for two or three months. The St. Mary got down as low last year as 150 feet.

Mr. WYVELL. It emphasizes the importance of having your agents there to report back what would be the best thing to be done. Of course, the countries would be glad to do whatever is equitable.

Mr. POWELL. It is not a question of facts at all. What we want to know is the principle to be applied to the facts. You had better think that over and put that in your brief, because that is what we are here for.

Mr. WYVELL. I will do that. I will take that up in writing.

Mr. POWELL. There are four possible constructions to that. I will write them out, if you like.

Mr. WYVELL. I had considered only three. I will appreciate it if you would write a brief summary of them before I submit my argument in writing.

(The commission thereupon, at 5.40 o'clock p. m., adjourned until Friday morning, May 28, 1915, at 10 o'clock a. m.)

FRIDAY, MAY 28, 1915.

Pursuant to the adjournment the commission met at 10 o'clock a. m., all the members being present.

Mr. TAWNEY. Have you anything further, Mr. Wyvell, that you desire to offer?

Mr. WYVELL. I think I have said all that I care to say.

STATEMENT OF MORRIS BIEN, OF THE UNITED STATES RECLAMATION SERVICE, DEPARTMENT OF THE INTERIOR, WASHINGTON, D. C.

Mr. BIEN. Mr. Chairman and gentlemen, there has been considerable discussion by the Canadian representatives as to the meaning of Article VI, and it has been the subject of some comment in the papers that have been presented to the commission. I would like very much to state the views that occur to me in regard to that treaty.

Article II is referred to specifically in Article VI of the treaty, and it is to be observed that the reservation of the rights of either party to the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into boundary streams is a very important limitation and is of general application to all articles in the treaty. The jurisdiction and control of waters reserved in this article in regard to streams crossing the boundary is so explicit that it may not properly be modified unless the treaty contains elsewhere definite language to that effect, and any such terms must be construed so as to avoid a modification of this reserved right beyond the definite meaning expressed. A modification by implication would not be within the rules of construction relating either to statutes or to contracts. Being a question of jurisdiction it is naturally one to be strictly construed, because under ordinary circumstances jurisdiction is not usually con-

ferred by implication. The preliminary article and Article II expressly exclude from consideration the waters mentioned in Article VI, because they are not boundary waters, as definitely defined. Therefore Article VI must be construed in connection with the limitations expressed in the preliminary article and Article II, and, in my opinion, Article VI should be construed strictly as against these limitations. Its language must not, therefore, be given a broader meaning than is clearly within its scope.

The first clause of Article VI reads as follows:

The high contracting parties agree that the St. Marys and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purpose of irrigation and power, and the waters thereof shall be apportioned equally between the two countries.

The words in parenthesis, namely, "in the State of Montana and the Provinces of Alberta and Saskatchewan," are not only intended to give the location of the rivers in question and their tributaries, but, in my opinion, must also be construed as a limiting clause to indicate the particular waters which are involved, namely, those of the St. Marys and Milk Rivers and their tributaries, lying both in the United States and Canada. If it was intended to express definitely a contrary conception, in my opinion, the word following "Montana" should have been "or". That is, if it read the waters of these two rivers in the State of Montana or the Provinces of Alberta and Saskatchewan, we would then have a basis for construing this article to cover all the waters of those river systems in both countries. But the word "and", in my opinion, is descriptive of the waters that occur on both sides of the line.

Mr. MIGNAULT. I do not desire to interrupt, Mr. Bien, and if you prefer I will reserve my question, but you will notice that the word "and" is used twice: "In the State of Montana and the Provinces of Alberta and Saskatchewan." Do you suggest that a river must be in the State of Montana and in the Province of Alberta and in the Province of Saskatchewan to fall under Article VI?

Mr. BIEN. No, sir. I construe that phrase as a very common construction in the English language, namely, it is a balanced phrase; the "and" balances it. Of course, there is not any contrast or lack of connection between Alberta and Saskatchewan. They fall in one category, naturally, and the word "and" connects the territory on one side of the line with the other, especially as the treaty itself deals with matters along the boundary. One who is not acquainted with the relative locations of these States and Provinces might be confused in that way.

Mr. MIGNAULT. As far as the Milk River is concerned, and the St. Mary River, they would fall under the description of the treaty. The words of the treaty would apply to both rivers, and unless you can suggest some limitation, my view would be that no part of either river is excluded.

Mr. BIEN. The answer to that, in my mind, is this: As Mr. Wyvell showed yesterday, the word "Saskatchewan" was inserted at the last moment.

Mr. MIGNAULT. That would show that these words were inserted at the last moment in order to give a new meaning to the article.

They are not put in the article for no purpose, and the fact that they were not in the draft and they were included in the article would show that it was intended to make some change in the draft and to give some meaning to these words. You can not read them out of the clause.

Mr. BIEN. Exactly. I think that the only effect of inserting the word "Saskatchewan" is to include what we speak of as the eastern tributaries of Milk River flowing from Canada into the United States. Without that word they would have been definitely excluded.

Mr. MIGNAULT. You are applying that merely to the tributaries and not to the rivers themselves?

Mr. BIEN. The main rivers were not in Saskatchewan, as I understand it, neither one of them.

Mr. MIGNAULT. Both of the main rivers are in Alberta and Montana.

Mr. BIEN. Of course, apparently you do not follow along the same line with me. My understanding of the insertion of the word "Saskatchewan" was in order to include the eastern tributaries flowing from Canada into Milk River. It is evident that without that word they must have been excluded, describing only Alberta on one side, just the same as if some of the tributaries of the Milk that flowed across the boundary were in North Dakota, and the omission of the words "North Dakota" might raise a doubt as to whether tributaries of that kind could be included.

Mr. POWELL. What would you do with the Swift Current?

Mr. MIGNAULT. It is exclusively in Montana. That water is a part of the water that crosses the boundary.

Mr. POWELL. As a tributary does it cross the boundary?

Mr. BIEN. No. I understand this treaty to refer to the main rivers as they cross the boundary, and all the waters that they carry that would cross the boundary, and then their tributaries which also would cross the boundary if not interfered with. In other words, the treaty, in my opinion, refers only to waters that would cross the boundary if not interfered with.

If we adopt a construction of this treaty which would take in waters that arise entirely in Montana or in Canada and never flow out of those countries and never could, we would, in my judgment, be indulging in a restriction of the express limitation of the preliminary article, and Article II by mere implication. That would be enlarging the jurisdiction of this commission because, as I claim, Article II defines the jurisdiction of the commission. This view is further enforced by the last paragraph of the article, which provides for measurements to be made jointly by the properly constituted officers on either side. This paragraph provides for an official act to be performed jointly by officers of the two countries, and if the interpretation which has been suggested by the Canadian representatives should prevail, this would mean that the officers of each country would act in their official capacities within the territory of the other country and upon waters which, as we claim, are not international and never could be.

If such had been the intent of the treaty, there would undoubtedly have been some provision recognizing the fact that an official of one government was to perform duties having official sanction within the territory of the other as to waters which by no ordinary

course of nature could reach the other country. In a way, it strikes me as importing into this treaty extraterritorial jurisdiction.

While this matter of measurement is covered by the general powers given to the commission by Article XII, and while I agree that the commission has the power to establish joint stations that shall be entirely within any country—in fact, it would be physically impossible to measure these streams satisfactorily otherwise—yet the power of joint action is confined, in my opinion, to international waters, making the same distinction between international and intranational, that we do in the matter of commerce where we have interstate transportation and intrastate transportation.

The important feature of this Article VI in the last paragraph is the statement that the commission is to measure and apportion the waters to be used for the purposes stated in the beginning of the article, namely, irrigation and power. The waters should, therefore, be measured and apportioned by the commission at such points as to show the amount used and not elsewhere, which might show nothing regarding the amounts used, but show merely the amounts not used, the amounts which have been wasted.

If it were the intent of the treaty to confer what I have, perhaps, inaccurately named an intra-national jurisdiction, we would hardly expect an omission of the power by express terms to make joint measurement for other purposes than the apportionment and use of the waters that would cross the boundary if not interfered with.

In the laws of the Dominion of Canada, printed in the rules of procedure which were issued by the commission, it is noted that the act of May 19, 1911, relating to the establishment of the commission confers no jurisdiction on the courts of Canada as to questions arising on streams whose waters can not cross the boundary. Special jurisdiction is given as to waters which cross the boundary and boundary waters which are within the scope of the treaty, and the intent of that act plainly is, in my judgment, to confer jurisdiction on the Canadian courts in cases of damages or injuries claimed as to streams which cross the boundary, so far as Article VI is concerned.

Mr. MIGNAULT. Mr. Bien, does it not seem to you that section 3 of the Dominion statute is intended to confer on the Canadian courts the jurisdiction required by Article II of the treaty, that is to say, to give redress of wrongs suffered by citizens of the United States by reason of an interference in the natural flow of a stream crossing the boundary?

Mr. BIEN. Article II, as I understand it, does not confine its operation and the conference of jurisdiction to either country. In fact, it speaks always of the injuries on the other side.

Mr. TAWNEY. But is it not a fact, Mr. Bien, that without this express enactment of the Dominion Parliament, enacting into the laws of the Dominion Article II of the treaty as is agreed to between Great Britain and the United States, there would have been no opportunity for the citizens of the United States suffering injury in consequence of the diversions of streams in Canada crossing the boundary into the United States without that enactment? Has that enactment any more significance than the article itself?

Mr. BIEN. Exactly; that is my point, that it confers no more jurisdiction than Article II does, which we claim would bar the United States or a citizen of the United States from making a claim.

Mr. TAWNEY. The treaty in Canada does not have the force and effect of supreme law over the land as it does in the United States. Hence the necessity of enacting this legislation for the purpose of conferring upon the citizens of the United States the same remedies in the courts of Canada for injuries sustained in the United States by citizens that Canada would enjoy on our side of the line under Article II of the treaty.

Mr. BIEN. Exactly so. The point that I wanted to make there was that section 3 of the Canadian law did not enlarge the jurisdiction of Article II of the treaty.

Mr. POWELL. It was simply in furtherance of that.

Mr. MIGNAULT. It carries out Article II of the treaty so far as the jurisdiction of the Canadian courts was concerned. The Canadian courts had jurisdiction beforehand which might not have extended to these claims. Nevertheless, section 3 of the Dominion act confers on the Dominion courts jurisdiction to pass on claims made under Article II of the treaty.

Mr. BIEN. I referred to that because I wanted to make an illustration in Canada. There are several tributaries arising in Canada and flowing into the St. Mary which get no water whatever from the territory of the United States. It may not be a physical possibility, but I believe it is, to take the water of one of those streams and carry it into another watershed, and the question arises then whether if that were done the United States, or a citizen of the United States, might go into the courts of Canada and protest against this injury and get his proper remedy. I merely suggest that as showing that in my judgment the jurisdiction does not extend to a stream whose waters could not cross the boundary.

Mr. POWELL. You probably are no more familiar with our laws than we are with the laws of the United States, but there is a series of decisions from away back in England and in the colonies to this effect: Apart from being a matter of practice, our courts have always held that no court in England or in the colonies has any jurisdiction with respect to an action regarding the land outside of its territorial limits, and even our courts of equity, which go very far, will never interfere with land outside of the territory for which they exist, but they will do this, they will seize upon the person who is perpetrating the wrong and hold him but not undertake to affect the land. You agree with that, Mr. MacInnes, do you not, as to the jurisdiction of our courts? Courts of equity will go this far, they will seize upon the person of a man and compel him personally to do a thing, but they will not undertake to affect the land.

Mr. MACINNES. That is correct.

Mr. BIEN. That is a familiar fact to us, especially in the Reclamation Service, where private individuals who could not enjoin the United States enjoin our officers as private individuals. The point I tried to make is that if this treaty affects the tributaries of the Milk River, that never by any possibility could flow into Canada, it would also affect waters that flow into the St. Mary in Canada that could never flow into the United States. So that in my opinion under the jurisdiction conferred by this treaty and by the Canadian

law there would be no possibility of either the United States or an individual in the United States finding a remedy in the courts of Canada for an interference with the diversion of a stream wholly in Canada.

MR. POWELL. No enabling act would be required for that. Our courts are open to American citizens the same as for anyone else.

MR. BIEN. How about the United States proceeding on its own account? It may be an interference with its project.

MR. POWELL. They will allow the United States to do that. There are numerous instances in our courts where the sovereigns of the other States have become parties.

MR. MIGNAULT. The difficulty was this. Whereas our courts are open to the citizens of any country and our courts might not have had jurisdiction to pass on matters or wrongs occurring outside the country, therefore section 3 of the Dominion act gives us a sufficient jurisdiction to carry out the provisions of Article II of the treaty, so that no question of jurisdiction of our courts could be raised against an American citizen claiming redress under Article II of the treaty.

MR. POWELL. That would make you give security for costs; that is all.

MR. GLENN. Can the United States Government go into your courts and bring suit in its own name against individuals?

MR. POWELL. Yes; there have been instances of that.

MR. BIEN. However that may be, it would not be reciprocal as to jurisdiction because of the difference in local laws, and that, in my opinion, would be very strong ground for holding that the treaty must be reciprocal, and, therefore, could not affect waters on one side which could not be equally affected on the other.

MR. TAWNEY. Mr. Bien, suppose you were to read the first part of the first sentence in Article VI and omit entirely the parenthetical phrase.

MR. BIEN. I think reading it by itself would sustain the claim that possibly intrastate waters were affected, unless there is some other ground on which it must be excluded, as, for instance, was suggested by Mr. Sands, which may or may not be correct.

MR. TAWNEY. Are there any tributaries to these two rivers outside of the two Provinces and the State named in that parenthetical phrase?

MR. BIEN. No, sir; that is my contention. I did not instance the case of the omission of this paragraph, but I did show that in my opinion there was a very vast difference between the use of the word "and" and the use of the word "or" in that sentence. The word "or" in that sentence would be practically the same as the entire omission of the paragraph.

MR. WYVELL. What you mean is that all the tributaries being in the State of Montana and the Provinces of Alberta and Saskatchewan anyway, there would be no use for the phrase if they intended to include all those tributaries. Is not that the thought of the chairman?

MR. TAWNEY. Yes.

MR. BIEN. In view of all these matters there should, in my opinion, be some conclusive evidence presented to support a claim that Article VI of the treaty refers to other than the waters which would

cross the boundary. Thus far nothing of that kind has been presented, so far as I know. On the contrary, an examination of the files of the Reclamation Service and the State Department of this country discloses the fact that the representatives of both countries who were engaged in negotiating the terms of this treaty in regard to the St. Mary and Milk Rivers preliminary to the formulation of the treaty have recorded their definite understanding of what was the subject of their negotiations, and that was the waters which crossed the boundary. It seems that in the correspondence which was exchanged between Mr. Newell, the director of the Reclamation Service at that time, and Dr. W. F. King, chief astronomer of the Dominion of Canada, the understanding of each party as to the subject of their negotiations was very definitely expressed. Beginning with the letter of Secretary Root on January 15, 1907, forwarded to the ambassador from Great Britain, we find set forth in full the stipulation and agreement proposed by the United States using the following language:

With a view to bringing to a determination the questions so long discussed relating to the waters of St. Mary River and the Milk River which flow across the forty-ninth parallel boundary between the United States and Canada.

Now, this is precisely in line with all the negotiations which had been in progress for five years, more or less, unofficially. In this letter the principles of division set forth in Article VI of the treaty were stated in considerable detail. The waters were to be measured where they crossed the boundary. Each stream was specified and a provision was made for measuring the waters where they crossed the boundary, and for providing also for any diversions of the tributaries of that stream on either side of the boundary before it reached that point. Paragraph 5 of that letter makes a basis of division which the representatives of the United States have not substantially changed. Of course, there might be some modifications recorded, but the principles in paragraph 5 of Secretary Root's letter of 1907 state substantially those which we think are now enacted into the treaty and which were strictly in pursuance of the negotiations from the very beginning, away back in 1902.

This draft of treaty was communicated to the Privy Council of Canada and a report made thereon. In this report there was a recommendation for the appointment of a representative from each country to consider the several suggestions made therein. Afterwards Mr. Newell and Dr. King were appointed to represent the two countries. On April 27, 1908, Dr. King presented to Mr. Newell a memorandum discussing the letter of Secretary Root to His Majesty's ambassador, dated June 15, 1907, and referring to the amendment of the Privy Council of March 2, 1908. He makes particular reference to paragraph 5 of the proposed draft in which the waters to be divided are described in detail as crossing the boundary or which would cross the boundary. Mr. Newell and Dr. King had quite a little correspondence on various matters. None of the letters for the next few months, as I recall, refer to this question of the description of the waters to be considered.

Finally, on October 15, 1908, Mr. Newell addressed to Dr. King a rather lengthy review of the situation, discussing the waters, but making no specific reference to the fact that he was considering

waters which crossed the boundary. In reply to this Dr. King, in a memorandum dated December 23, 1908, in the third paragraph from the end, suggests the following:

A principle which is free from this objection and is moreover a simple one is that of equal division of water on the boundary streams (each country providing for its existing interests out of its share in the water.)

Now, note here that Dr. King uses the term "boundary waters" undoubtedly in a different sense from that which was afterwards brought out in the definition in the treaty, because he was not dealing with any boundary waters. There was nothing before him, and he could not have meant boundary waters as defined in the preliminary article of the treaty.

Mr. TAWNEY. The preliminary article of the treaty expressly excludes all waters that cross the boundary.

Mr. BIEN. Yes. I assume that the treaty regarding the other matters was being formulated and had its definition of boundary waters, and that Dr. King was familiar only with this branch of it and perhaps was not aware of the definition.

Mr. MIGNAULT. Does not Article VI stand by itself?

Mr. BIEN. In a certain sense. I would not construe it out of the treaty any more than I would a section of a contract.

Mr. MIGNAULT. The point I would like to put to you is this: Do you admit that the entire St. Mary River falls under Article VI of the treaty?

Mr. BIEN. Only the waters that would cross the boundary. That is my whole contention.

Mr. MIGNAULT. I would like you to explain that.

Mr. BIEN. Well, there are two or three tributaries that arise north of the line which carry no water from the United States.

Mr. MIGNAULT. But the waters of the tributaries form a part eventually of the main river.

Mr. BIEN. I have been trying to make that distinction all along between the international waters and the intrastate waters.

Mr. MIGNAULT. If, according to your construction of Article VI, it applies only to rivers which cross the boundary, then, inasmuch as both the St. Mary and the Milk Rivers cross the boundary, it would apply to these rivers and would necessarily apply to the whole of the rivers. Therefore, if the waters of the tributaries of each river eventually form a part of these rivers, then that would be included in the treaty?

Mr. BIEN. I think you omit my point that the tributaries are to be treated also in regard to the waters which cross the boundary. I think the first clause of Article VI speaks of the St. Mary and its tributaries.

Mr. MIGNAULT. Then you refer merely to such waters as cross the boundary, excluding all the rest?

Mr. BIEN. Excluding everything that does not cross the boundary or would not if left uninterfered with. I am trying to show here that Mr. Newell and Dr. King were discussing nothing else and, as a matter of fact, as I say, there were some five years of negotiations before that time, and they discussed nothing else. Dr. King, in this memorandum that I spoke of, dated December 23, 1908, states in his last paragraph that Mr. Newell seems to prefer this principle—that

is, equal division of water of the boundary streams—although he does not state definitely that he accepts it as a guiding one. Dr. King asks in the final paragraph, "Will Mr. Newell state his assent to this principle as a basis for the negotiations"? This was less than three weeks before the signing of the treaty, and no further correspondence seems to have been exchanged between Dr. King and Mr. Newell. However, Mr. Newell expressed his view upon this principle a week or so later, as we shall see. Soon after this memorandum of Dr. King's, Mr. R. H. Campbell, forester of the Canadian Government, as representative of that country, came to Washington, and in the course of his discussion with Mr. Newell it appears that both Mr. Campbell and Mr. Newell, on December 29, 1908, prepared drafts for the proposed treaty. There seems to be, perhaps, a doubt of a day or so as to Mr. Campbell's draft, but they were practically within a day or two of each other. In both of these drafts the subject of the negotiations was definitely confined to the waters of the streams which cross the international boundary. Both memoranda specify that the measurements shall be made at the point, or points, where such streams cross the international boundary. I understand there were one or two other drafts prepared about that time, but I have never seen them and so I am not able to speak of them.

It appears, therefore, that on December 29 or December 30, two weeks prior to the signing of the treaty, representatives of both parties were in accord upon the point that the waters shall be measured at the crossings of the boundary. It is understood that when Article VI was finally drafted an attempt was made to condense it as much as possible in deference to the desires of our State Department and also the ambassador from Great Britain, as the treaty itself was rather long in regard to the other points discussed. It is, therefore, not to be wondered at that in condensing the language those matters which were obviously within the contemplation of both parties might have been left unexpressed. That is my explanation of that point, because they had so frequently, in the course of their negotiations in the final draft, discussed only the waters crossing the boundary.

MR. POWELL. That is the inference you draw?

MR. BIEN. That is my inference; yes, sir. Mr. Sands yesterday suggested a point that is worthy of very careful consideration, although I am not prepared to discuss it now, and that is that when the United States makes a treaty it must act within its treaty-making powers. The question is one of considerable importance, because if, as we think—I simply say I think, as I have not looked the question up—the treaty-making power can not apply to a purely intrastate matter, a domestic matter; the treaty can not have any scope beyond what is international.

Now, a treaty, in my judgment, and I think it is about what the books say, is an agreement between nations which, by their individual laws, has the sanction of law or is made equivalent to a law. The fundamental conception of a contract is that it is an expression of the meeting of minds. Now, in order to determine upon what points the minds of the parties met, if there is any question as to what the words of the contracts say, it is, of course, natural and it is customary to go to the preliminary negotiations. Of course, I

admit that as to any new conception the former drafts can not be included; the treaty speaks for itself. But if what seems to us the plain language of the treaty is not considered as correct I think we would have the right, as you would in any court, to go back to find out what the people were talking about when they made that contract. As I say, you may search through the correspondence and there may be something in the Canadian records that I have not seen, but I think I have seen all the correspondence which was exchanged between the representatives, and there is nothing at any time which suggests that the subject of this negotiation was such as to include any waters which would not cross the boundary. Therefore, in my opinion, there has been no meeting of minds in regard to waters which would not cross the boundary. Accordingly, if this treaty is to be enforced, or, I should say, your commission should enforce it in such a manner as to carry out what was in the minds of the parties and what was very plainly a matter of record, it is not a matter of hearsay at all.

Aside from any question as to what is the meaning of the treaty, the commission has a very difficult question presented to it for action, and that is to divide quantities which are very uncertain. We talk about the floods and we talk about the average flow, but we ignore what, in my opinion, is the principal thing, and that is the low flow. A man will never build a reservoir that can be filled, to his knowledge, but once in 8 or 10 or 12 years. He would be spending money with very little prospect of return. There may be exceptions to that, and there are, in fact, in the southern part of the United States, where we have orchard lands, and where the lands are worth a thousand to two thousand dollars or more per acre purely for their horticultural value, and where it would pay to put in a large investment that would be used once in 10 or 15 years; but up in Montana, where it is conceded that the land values are very much less, the highest values that I have heard of in Montana being between two and three hundred dollars an acre for the very best alfalfa land, an investment that would be of real value but once in 10 years would hardly be justified. So we must consider really as a practical matter What is the water that you can depend upon from year to year? It might be well enough to provide for hold-over storage for one or two years, but the point that I make is we can not consider these high records.

So far as I understand from our conferences with our Canadian friends, there are certain points in which we are in agreement as to what should be done. I make this statement subject to correction. In the first place, we are in agreement, I think, that the commission should appoint the agents mentioned in Article VI and should ratify the location of the stations which have been in an informal way established by joint action of the representatives of the two countries. Then it should establish such other stations as are jointly agreed upon, namely, those which are necessary to measure the flow of the streams across the boundary and also to measure the waters which are put to use on either side of the boundary of the class of waters that would flow across the boundary. With these stations established and men appointed to study them there certainly would be no question whatever about it. I doubt if there would be any question on either side of the line under present conditions for two or three years

at least, and maybe much longer. These men might proceed with their measurements and make their apportionments, subject to the supervision of the commission, in an occasional week when there was a possible shortage to be reckoned on.

These men, of course, will report to the commission. They would report the difficulties that they meet, if any, and the commission would then have authentic records of its own as to what these rivers have been doing and what are the present demands on either side. Then, if either country should present to the commission a showing that there is a demand for more water on either side than is easily apportioned by the agents of the commission and show that this thing is urgent, it would be up to the commission to see where there would be a possibility of furnishing more water. But at present, in my judgment, the commission need not go beyond the agreed proposition that at least the waters crossing the boundary are to be divided.

If there are any other waters to be divided, if this intranational water is to be divided, it will not become a matter of urgency or a matter of much importance on either side for several years. Meanwhile, the commission will have perhaps four years for a thorough and impartial study agreed to by its joint agents which it can study and upon which it can decide as to the apportionment from year to year. As I understand it, the commission has not had presented to it any evidence of any desire on the part of either party for a more extensive supply than is now available or will be available for the next few years.

We all know that the possibility of raising money for irrigation development at this time in either country is out of the question. There is no possibility for any very large enterprise; at least, that is my judgment. I know it is difficult here and outside of Government bonds or those that are guaranteed in some way by the Government. An irrigation bond would not be of much value in our market, and while I do not profess to have much knowledge of the conditions on the other side, I think they must be very similar. For that reason the commission has now before it an ample amount of information to proceed for several years, and it may be that after they have studied the situation, after they have been dividing the waters for four or five years, these other controversial points may have entirely disappeared; that is to say, the experience that will have been gained by this action of the commission where it has itself taken hold of the project may show what we claim, that the waters which pass the last points of diversion of the main streams are not used; they are not within the waters to be divided for use or power. It may be that after all this experience the commission will find that this is a question that is more academic than real, and certainly it is not at all a question that is urgent for action at this time.

MR. MAGRATH. Taking the interpretation that you gave, namely, the division of the waters which flow from one country into the other, and the other interpretation which has been suggested that this article covers all the waters, and considering the averages of the two catchment areas for a term of years, how much water is involved in the difference between these two interpretations?

MR. BIEN. It varies a great deal. The waters of the Montana tributaries—by that I mean those which could not cross the line coming into Milk River from the south—are such that can not be

controlled. Moreover, I think to a considerable extent they have been put to use as far as they can be used in the ordinary year. The run-off from those southern streams during the irrigation season is very, very small except when we have a rainfall. Then every farmer fills his reservoirs and his canals and gets all the water he can on the land, but in two or three days it is gone.

Mr. SANDS. Do you have reference to the Bear Paw stream now? I would like to correct that statement because that is not true.

Mr. MAGRATH. You put it to beneficial use?

Mr. SANDS. It is put to beneficial use before it arrives at Milk River.

Mr. BIEN. It is used as rapidly as possible. It may be that there is so much demand on the Bear Paw that the rains are all used before they get down to the main river, but that, as I understand it, is the case in only a few of those tributaries. Most of them flow for a few days a comparatively large amount of water when there is a rainfall, which is absolutely wasted except those amounts which go into the Milk River above our diversions.

Mr. TAWNEY. You are excluding now the tributaries of the Milk River that cross the boundary east of the eastern crossing, are you not?

Mr. BIEN. No, sir; I am speaking only of those that are purely intranational, that never cross the boundary and never could. Those people are using that water, perhaps, not as efficiently as they might, but the question of reservoirs is a very difficult matter there. There is no opportunity on any of those streams for a very large reservoir. A desert-land entry under our laws is an entry for 320 acres or less, which a man proposes to reclaim either by his own individual efforts or by means of some combination or some large scheme. A man is required to present to the Land Office of the United States an application for 320 acres, or whatever he desires, with a general plan. Of course, in those individual cases it is not expected to be a regular engineering plan with full estimates, and the Land Office of the United States is now very busily engaged in determining in Montana, in the tributaries of the Milk, to what extent there has been a reasonable showing as to water supply by these preliminary plans in regard to entries involving nearly 200,000 acres. That is shown in the exhibits that Mr. Newell put in yesterday, and which is part of a report which has been recently made upon all the tributaries of the Milk on both the north and south sides.

Mr. TAWNEY. Have not the citizens on our side the right to enter 320 acres of land irrespective of any water supply under the so-called dry-farming act?

Mr. BIEN. Yes; I was speaking only of the desert entry.

Mr. SANDS. Do you mean to say that the 200,000 acres that you speak of in the report of Mr. Newell had no reference to the lands which have been abandoned in years past?

Mr. BIEN. No.

Mr. SANDS. Do not the lands abandoned in years past exceed by three or four times the amount of land that is in consideration in that basin?

Mr. BIEN. I think so.

Mr. TAWNEY. The land in eastern Montana has not been surveyed for the last two or three years.

Mr. BIEN. The surveys have been extended in the valley lands pretty thoroughly a good many years back, but in the hills where these streams have become small, and where the effort is almost wholly individual, there has been no survey because the land did not seem to have any value.

Mr. SANDS. The lands in the Bear Paw Range have been surveyed in at least 15 years. I know, because final proofs have been submitted before me for a thousand acres of that land.

Mr. BIEN. I am speaking of all the tributaries of the Milk, particularly those on the south side, and I know that a large part of the desert-land entries now pending are unsurveyed land.

Mr. SANDS. Yes; that is true.

Mr. BIEN. I was explaining the desert-land law. The Land Office I may say, is now doing what it should have done a good many years ago; that is, making a very careful study of these desert-land entries and insisting that there shall be a reasonable showing of water supply. Some small reservoirs on some of these streams and ditches take out the water when it is there. Some of the streams flow regularly all the year, but very, very few. The Bear Paw is one of the longest tributaries and, therefore, has a greater catchment area. The point that I was trying to make when I was diverted, was this, that practically all the water that is tributary to the streams coming in on the south side of Milk River has been claimed, and nearly all that can be put to beneficial use has been so used. Of that water the amounts getting into the main river and going into the Missouri River, never crossing the boundary, are usually big floods and the floods that constitute the greater part of the flow of Milk River proper in Montana. So that that water is such as has been appropriated either for lands that have been abandoned, as Mr. Sands says, for many years or for these lands which are now settled and awaiting patents. A considerable number will doubtless be issued in the next year or two, because action has been postponed until the Land Office could make a careful study of the water supply, and the report from which Mr. Newell has made extracts for the benefit of the commission was made by that committee upon the basis of which the Land Office will unquestionably issue patents for many thousands of acres of land. So that water is taken up. It is not water that can be divided, and it is not water that, in my opinion, gets into a place where it can be divided.

Mr. GLENN. Mr. Bien, how many rivers of any considerable size south of the line never flow into Canada?

Mr. BIEN. I would like to have Mr. Sands answer that. Outside of our project, I have never been over the ground.

Mr. POWELL. Your contention is that Article II of the treaty must be read into Article VI and as a part of it?

Mr. BIEN. Yes, sir.

Mr. POWELL. Would you carry into section 6 also the provision there for reclamation by having the decision of the court in the opposite country in which what you might call the ruin or trespass was done?

Mr. BIEN. There is quite a question there, because section 2 explains very definitely one case at least where Article VI applies. How far it would apply otherwise I do not know.

Mr. POWELL. Even those waters which are covered by the treaty, such as the St. Mary River, would afford an opportunity to a Canadian settler who is deprived of his water to go into the courts of Montana and have damages assessed him for the very things done under the treaty.

Mr. BIEN. I think Article VI, so far as it affects the jurisdiction of Article II, must control, but it must be explicit. It is not proper, in my opinion, to do it by implication, because questions of jurisdiction do not readily lend themselves to implication.

Mr. TAWNEY. I understand that your interpretation of Article VI in connection with Article II is that the first part of the article should read as follows:

The high contracting parties agree that the St. Mary and Milk Rivers and their tributaries crossing the boundaries in the State of Montana and the Provinces of Alberta and Saskatchewan are to be treated as one stream.

Mr. BIEN. If the treaty had been drawn to follow out the consistent line of negotiation it would have read that way.

Mr. POWELL. That is, you want those words inserted?

Mr. BIEN. Yes.

Mr. TAWNEY. Your contention is that, construing Article II as a limitation upon the interpretation of Article VI, it would mean that it should have the effect of limiting the language of Article VI to the tributaries crossing the boundary in either the State or in the Provinces?

Mr. BIEN. Yes. I think one reading Article VI without a knowledge of the history and the surrounding circumstances, which the courts always consider, might be in doubt; but taking in the history and the surrounding circumstances, together with the causes that led to the enactment of this treaty, we have a definite basis of determination, and, in my opinion, there is not anything in that Article VI contradictory to the line of negotiations that was pursued from the start. It was merely for reasons of rhetorical elegance, perhaps, that it was not made more explicit; but, in my opinion, the language is susceptible of a construction and should be construed entirely in line with the negotiations that have been going on for 10 years.

Mr. TAWNEY. Mr. Bien, could this be possible: That the negotiators framing this article, not being fully advised as to the location of all the tributaries of the St. Mary River and especially of the Milk River, put in that parenthetical sentence for the purpose of limiting territorially the tributaries that should be considered in the division of these waters?

Mr. BIEN. It is pretty hard to conjecture what was in their minds. My knowledge is derived from personal discussions with Canadian representatives in the earlier part of the proceedings, early in 1908, but mostly in later times from Mr. Newell's discussions with me after having these conferences with Dr. King or with the State Department, and it is my understanding, which he can possibly confirm, that after he had submitted his draft of December 29, 1908, he had very little to do with the language. I remember that either before or just after that time we did have before us for discussion a short paragraph. It was shorter than this Article VI. I do not recall what was in it and a hunt through our files has failed to disclose it, but apparently it was a mere temporary draft, and possibly had not been shown

to the Canadian side. At any rate, it is not here. I know that I went over a short draft just about that time, but my understanding is that after Mr. Newell's memorandum of December 29, 1908, he had very little to do with the wording of that law. Of course, he can confirm that, if desired. I think that, at least on the side of the United States, those who actually framed this language were not thoroughly familiar with all these physical conditions.

Mr. TAWNEY. I think so, too.

Mr. WYVELL. I do not want to keep interrupting, but if you will look at the State of Montana and the Provinces of Alberta and Saskatchewan, you would hardly think that that could be possible, because none of the tributaries reach within, you might say, hundreds of miles of any boundary.

Mr. MIGNAULT. That idea might help your argument, Mr. Wyvell, rather than otherwise.

Mr. WYVELL. I do not think it would especially. I do not think it has any bearing. But whatever the facts are geographically they can not be changed.

Mr. SANDS. I wish to lay down several distinct and decisive principles. The first is, that the treaty power of the United States can not reach within the territory of Montana upon subjects which can not be the subject of international controversy. I have here authorities which I think will absolutely sustain that point. I state this first because it is the most important.

In the second place, I state that the treaty is ambiguous.

In this third place, I state that the treaty, by its preamble, limits the consideration of the matters taken into consideration.

In the fourth place, I state that in view of the fact that the treaty is ambiguous, we then have the right to resort to the circumstances which led up to the making of the treaty.

And in the fifth place, I state that it is apparent from the testimony which has been adduced here that if the construction contended for by the Canadians is true, we will have to turn the Milk River and run it up hill and back into Canada.

Mr. MIGNAULT. I do not think the commission would attempt to do that.

Mr. SANDS. And yet that seems to be the contention of the Canadians. I will take that proposition first.

The testimony here shows that the Milk River and the St. Mary deliver at their mouth practically the same amount of water, without taking into consideration the streams which flow from the Bear Paw Mountains, the Little Rocky Mountains, and all that territory south of the Milk River in the United States. That was the testimony of Mr. Peters and of the witnesses, that the two streams were practically the same, when they considered the amount that is measured at the mouth and the amount that is taken out along the Milk River. I believe it includes a small amount taken out by two ditches in Battle Creek which deliver water on the Milk River lands. Now, understand me, the testimony here shows that if there is a very large area south of the Milk River, that its tributaries have been appropriated years ago, and I want to say that this is the most highly developed portion of northeastern Montana to-day; that is, the land that slopes from the Bear Paw Mountains to the north. The Bear

Paw Mountains is a string of mountains 60 miles long, and from it flow streams that run the year round in almost every season. They are big streams, and by reason of the fact that the rainfall in the mountain regions is very much heavier than to the north, where there are no mountains, the water that comes from the Bear Paw Mountains is almost one-half of the water that flows into the Milk River in its natural condition. I have been there and I know what I am talking about. There are flowing from the upper Bear Paw Mountains, commencing on the west, the Big Sandy, Box Elder, which is a branch of Big Sandy, the Beaver Creek, which alone, in my estimation, flows as much water as either Battle Creek or Frenchman in its natural condition. We have two Box Elders flowing into the Bear Paw Mountains. There is Clerk Creek, on which there is a high state of development, and there are thousands of acres irrigated from that stream. It is so highly developed by reservoirs and irrigation ditches that there is seldom at present any of the waters of that stream that reach the Milk River, but in its natural condition a very large volume of water flowed into the Milk River, even better than Lodge Creek and perhaps equal to Battle Creek, because it flowed a steady stream. Such being the condition, these waters having been eliminated from the figures submitted by the engineers here, it would appear that Milk River is a stream at least once and a half as large as the St. Mary, and that in order to make an equal division of the waters we must furnish the Canadians with large volumes of water from the Milk River, a larger volume than could possibly flow past the canals in Canada from the Milk River. I stated the fact that if a division must be made on the basis here stated the Canadians would take all of the waters that flow down the Milk River, all of the waters that flow across the international boundary line, as borne out by the paper which has been submitted here by the engineers. If you go over it you will see that we would have to deliver back to Canada from the Milk River a portion of the waters of the Milk River and have none of the waters of the St. Mary.

The treaty provides that the United States shall have the right to flow the waters of the St. Marys through the Milk River in Canada. That provision would be absolutely useless; it would have been worthless, absolutely worthless, if this construction contended for were to be admitted.

Mr. MAGRATH. Are you serious in making the statement that the Canadian contention would mean that you would not get any of the waters of the St. Marys River at all?

Mr. SANDS. Yes, sir; I mean to say that if the waters of the St. Marys and Milk Rivers were to be divided equally, the Milk River being a much larger stream, once and a half the size of the St. Marys, then you would be entitled to a portion of the Milk River, and we would not be entitled to any portion of the St. Marys.

Mr. MIGNAULT. Why?

Mr. SANDS. Because there is to be an equal division.

Mr. MIGNAULT. I do not follow you.

Mr. SANDS. Let me put it this way: The Milk River is one and a half times the size of the St. Marys; the St. Marys is a smaller stream.

Mr. MAGRATH. I know the situation locally, and it is something new to me that the Milk River is a larger producer of water than the St. Marys River.

Mr. SANDS. I have Mr. Peters's figures here. Mr. Peters's statement was that the Milk River flowed 735,000 acre-feet in the year, on an average.

Mr. MACINNES. I think you are wrong there.

Mr. GLENN. I always understood that the St. Marys is the larger river of the two.

Mr. SANDS. They have so stated, but they have not taken into consideration the waters of the Bear Paw Range, which never reached the Milk River to be measured.

Mr. GLENN. You say they were not taken in?

Mr. SANDS. They were not, and that is the reason I say that the Milk River, in its natural condition, is much the larger of the two streams.

Mr. TAWNEY. Are you taking the measurement at the mouth?

Mr. SANDS. Mr. Peters says that the average flow, taking the data they have, of the Milk River, is 735,000 acre-feet per annum. The annual flow of the St. Marys River is 807,000 acre-feet per annum in the average. There is a slight difference in favor of the St. Marys River there. Concede that much. This takes into consideration 38,000 acres of waters which had been diverted prior to reaching the mouth of the Milk River. That is included in the 735,000, but that is all that is included. They do not include the waters of the Bear Paw slope, which I say to you will exceed a good deal more than one-quarter, or nearly one-half, of the waters that would naturally flow into the Milk River, and which have not been taken into consideration at all. Therefore, it is clearly apparent—don't you catch my point, Mr. Mignault—it is clearly apparent from the figures taken that the Milk River is much the larger stream, I say one and a half times and I think I say it advisedly, the size of the St. Marys. If that is the case, there would be no purpose in the United States taking the waters of the St. Marys and bringing them over into the Milk River, because they would have to be delivered back in order to make an equal division.

That provision of the treaty is absolutely nugatory if you take into consideration the physical facts which have been presented to you. If my point is not absolutely plain I would like you, gentlemen, to ask me questions.

Mr. POWELL. Your contention is plain if the facts bear it out.

Mr. SANDS. The hydrographs and the testimony here bear me out.

Mr. POWELL. That will be for us to look into.

Mr. MIGNAULT. So far as the facts are concerned I am not yet convinced.

Mr. GLENN. You say that these gentlemen did not take into consideration the water you are speaking of south of the line, what you call the Bear Paw water?

Mr. SANDS. Yes; the rivers from the Bear Paw Range.

Mr. GLENN. And you say if you take these waters, which they did not take into consideration, plus the waters in the Milk River that they did take into consideration, the two combined would be more than the amount of water in the St. Mary River.

Mr. SANDS. Yes, sir; by nearly one-half. If you look at the map, that will be more apparent. It was stated by Mr. Newell that the basin of the Milk River is bounded by the Sweet Grass Hills on the south, then by the Bear Paw Range, then by the Little Rockies. It is bounded on the north only by the Cypress Hills. The Cypress Hills do not compare in size with the Sweet Grass Hills, and mostly all of the flow from the Sweet Grass Hills flows over into the Marias River or into the Milk River, exclusively upon American soil. Coming next to the Bear Paw, the mountains there are as high at 6,500 feet. It is a large mountain range, and from that large streams flow into the Milk River in the United States, and from that there is the highest state of development in that section of the State. These lands have been developed as early as 1890. They were the first lands developed. They were developed even before those in the Milk River Valley, and all of these streams have ditches and numerous reservoirs are built there.

Mr. POWELL. What acreage is there?

Mr. SANDS. I should say it far exceeds the area in the Milk River Valley.

Mr. POWELL. Fifty thousand acres?

Mr. SANDS. It would exceed 100,000. I think there are 150,000 acres of land in the Bear Paw and Little Rockies, all in American territory and all south of Milk River.

Neither did these figures take into consideration the flow of streams from the north, other than the one stream mentioned, namely, the Battle Creek. They did not take into consideration the irrigation from the West Fork of Lodge Creek, as you call it. The Lodge Creek irrigation in the United States is very large. They did not take into consideration the irrigation from Parallel Creek, which is large; they did not take into consideration large streams along the way. So I tell you frankly, I do not believe if you measure the Milk River that the figures there given are more than two-thirds of the entire flow.

Mr. MAGRATH. What, in your opinion, is the acreage that is irrigated on these streams in Montana which flow from the north into the Milk River?

Mr. SANDS. The North Chinook Irrigation Association is probably one of the largest, and I think they have approximately 6,000 acres. Then there are numerous small irrigation projects.

Digressing from that point, I now wish to deal with the ambiguity of the treaty. While I may possibly repeat something that has been said by Mr. Bien and by my other colleagues, I do wish to emphasize my point of view in this particular. Reading from the treaty, the preamble, which is the controlling language of this treaty:

His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India, and the United States of America, being equally desirous to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other along their common frontier, and to make provision for the adjustment and settlement of all such questions as may hereafter arise, have resolved to conclude a treaty in furtherance of these ends.

The point is this: The treaty says they are going to make a contract in relation to all matters of controversy then pending or which

may arise. That limits it, you can go no further, that is a limiting clause. It says: "All matters of controversy then pending or which may arise."

Mr. MIGNAULT. That is pretty wide, though.

Mr. SANDS. That is true, but let me ask you how can any controversy arise respecting the waters that flow from the Bear Paw Mountains into the Milk River? How could any controversy arise between the United States and Canada respecting these waters? That is an utter impossibility. None has arisen; none can arise. Therefore, I say to you, I firmly believe that the provisions of this treaty are thoroughly and fixedly limited by that preamble.

Mr. POWELL. It might not be a subject of controversy, but might it not be one of the elements that is taken into account to settle a controversy?

Mr. SANDS. I do not think it could be. This treaty deals only with such controversies which have arisen or may arise.

Mr. TAWNEY. It says "and to prevent disputes."

Mr. SANDS. There could be no dispute regarding the waters of Clear Creek, which flows into the Milk River from the south.

Mr. POWELL. That might be a quid pro for giving the United States the right of transportation through the Milk River in Canada.

Mr. SANDS. But the treaty power can not reach that, and I shall deal with that later. That is my contention when I say there is a limitation in the treaty. As I say, it is a limitation, and I am going to say further, that reading this preamble with Section VI it constitutes an ambiguity. If you do not concede me that principle, you must concede that reading Section VI of the treaty and the preamble it constitutes an ambiguity. A principle of law is that where there is ambiguity you have to read into it the antecedent circumstances and surroundings of the making of a contract or a treaty. That is a well-established principle of the law on both sides of the line.

Mr. POWELL. You would have the right to do that without any ambiguity.

Mr. SANDS. If you concede so much you certainly can go to the point raised by Mr. MacInnes.

Mr. TAWNEY. I do not wish to restrict you, but it is generally understood that we will close to-day, and thus far the discussion on the construction of the treaty has been entirely on one side, and if we are to conclude the hearing this afternoon, and give the representatives of Canada an opportunity to reply, it will be necessary to restrict the discussion to some extent.

Mr. GLENN. I think there will be time enough, even if we have to stay another day.

Mr. MIGNAULT. I am ready to stay another day if necessary, I want all sides to be heard.

Mr. TAWNEY. So do I, but I want to call attention to this matter now so that there will be no complaint afterwards if the session of the commission has to be extended.

Mr. GLENN. The gentlemen can restrict their remarks as much as possible.

Mr. TAWNEY. Mr. Sands having discussed this point for some hours yesterday, I thought he would be able to condense his present remarks somewhat.

Mr. SANDS. The most important point is the question which I raised yesterday. At that time I simply raised it as an expression of opinion, but as some authorities were mentioned last night which would seem to imply the contrary, I have this morning obtained the latest work on limitations to the treaty-making powers, which is by Henry St. George Tucker, and I should like to place this work at the disposal of the commissioners, because it treats with the matter very lucidly.

Mr. GLENN. Henry St. George Tucker was a very able lawyer in the State of Virginia.

Mr. SANDS. My first quotation will be from page 380, entitled "Japanese-California controversy." The discussion in this work is so pertinent that I may be compelled to read somewhat at length, but I think you will see the force of the argument.

Mr. MIGNAULT. The point is very important; it is the most important point raised at this hearing.

Mr. SANDS. Yes, sir; and I think this discussion by the author discusses it very fairly.

(Mr. Sands then cited from page 380, Henry St. George Tucker's book, the chapter "Japanese-California controversy.")

According to the views expressed yesterday by some gentlemen before this commission, the Federal Government would have the right to make a treaty respecting the property of any State or within any State. The argument went so far as to say, in fact, that the Federal Government of the United States had the right to come into the city of St. Paul and say that the treaty power would extend to street car lines in this city, if there was any question of controversy between the two Governments respecting them. My statement, when I first addressed the commission, was that the treaty power extends only to those matters which may be the subject of controversy between two nations, and the question of a street car line in a city could not possibly be the question of controversy between two nations. I state again that the principle here involved is that the Federal Government has no right to make treaties respecting matters which can not be matters of controversy between two nations.

Mr. GLENN. As I understand it, you mean to say that Montana, having complete control over these rivers entirely within the State—

Mr. SANDS. Given by Congress.

Mr. GLENN. And having the right to irrigate these lands, which they have already authorized their people to do, that the Federal Government can not come in and make a treaty with Great Britain which would in any way interfere with the right given to these people by the State in regard to a matter entirely within its jurisdiction.

Mr. SANDS. That is what I mean.

Mr. TAWNEY. Would not the logic of that preclude considering the use of any of the waters of the Milk River, or any of its tributaries, flowing across the boundary in the State of Montana?

Mr. SANDS. I do not think so. The treaty power of the United States has no authority to consider matters which can not be the subject of controversy between the two nations.

Mr. TAWNEY. The waters of the Milk River, after they cross the boundary, then come back into Montana and never return; are they

not as much the property of the State of Montana as the rivers that rise in Montana and remain in Montana and empty into the river below the boundary?

Mr. SANDS. Yes.

Mr. TAWNEY. The logic of your position would be to cut out all the waters that are exclusively in the State of Montana.

Mr. SANDS. Yes; it would cut out all waters that do not flow across the boundary.

Mr. TAWNEY. When they cross the boundary they are as much the property of Montana as any river water.

Mr. SANDS. The waters that flow into Canada would be the subject of controversy, but after they come back into the United States we know that there can be no controversy respecting these waters, because the Canadians could not use them.

Mr. TAWNEY. Exactly; your position would go to the extent of excluding from any treaty provisions the apportionment of the water of any river that crossed the boundary and came back into the State of Montana?

Mr. SANDS. Yes, sir. May I give a concrete illustration? The Chicago Canal is an artificial waterway. The water never flowed from the Chicago River into the Mississippi, but they have constructed an artificial canal. That work may be the subject of international controversy and might be the subject of treaty, and I believe is. But if the waters of the Chicago drainage canal originated in and only ran through that canal I do not believe that the United States could consider it a subject of controversy. But that is a little bit different because it connects with the waters that go into the St. Lawrence, and I may not have given a very happy illustration. The waters that have passed into Montana can not be utilized and there can be no claim in any way by the people of Canada on them after they come over to this side of the line and never can return in their natural course.

Mr. MIGNAULT. Your argument, I think, is stronger when you exclude the element of controversy. Your argument is that the treaty-making power of the United States does not extend to a river which is wholly situated in the State of Montana?

Mr. SANDS. Yes.

Mr. MIGNAULT. And without bringing in the matter of their being subject to controversy, I think your argument would be better.

Mr. SANDS. But I add, in addition, if it can be the subject of international controversy.

Mr. MIGNAULT. On the question of jurisdiction, to say that a river wholly situated in the State of Montana can not be the subject of a treaty-making power with the United States, so far I follow you. But it is not necessary for your argument to question whether or not such a river could form the subject of a controversy between the United States and another power.

Mr. SANDS. I think this authority holds both; it is continuous. But, for my view of it, I say that it would need to go only to the one point. I think it strengthens the proposition to say that it must be shown, before the treaty power can have anything to do with it, that it could be or is the subject of international controversy.

Mr. MIGNAULT. I think your strong argument is this: That if such a river is subject to the exclusive jurisdiction of the State of

Montana, then the United States can not dispose of it in any way by a treaty with a foreign power.

Mr. SANDS. Not until something arises which can make it the subject of controversy.

Mr. MIGNAULT. Whether it is the subject of controversy or not.

Mr. SANDS. I can not conceive of any conditions under which that would be the subject of international controversy. It might be that the river flowed to within a couple of miles of the international boundary and the Governments of the two countries might deal with it under certain conditions; one Government might be establishing forts across the boundary that might be the subject of international controversy, and they might make a provision that no forts or no dams for war purposes should be established, and probably they could do that, while it might be wholly within the State.

Mr. MIGNAULT. That would be a different question, because the United States has undoubtedly jurisdiction in military matters.

Mr. SANDS. I do not admit that any further than the provisions of the Constitution go. We do not use the term "military" at all.

Mr. TAWNEY. The Federal Government has exclusive power and control over all matters affecting the national defense, and for that purpose the United States could take measures anywhere.

Mr. GLENN. The point Mr. Sands makes is that this river, being entirely within the State, it does not come under treaty provisions.

Mr. SANDS. That is the point.

(Mr. Sands further quoted from Tucker.)

Mr. SANDS. This statement of the law applies to my argument by showing that if you accept the Canadian construction of the treaty, then there are provisions in that treaty that are nugatory.

Mr. MACINNES. I think Mr. Sands's purpose would be attained if he gave us the references to the pages of this work instead of reading them.

Mr. TAWNEY. These cases to which you are referring, Mr. Sands, involve questions under the Constitution.

Mr. SANDS. Yes.

Mr. TAWNEY. They are not cases which involve the construction of treaties for the purpose of ascertaining the right of the treaty-making power.

Mr. SANDS. I think they are.

Mr. TAWNEY. These are cases in which I think the right of the State is involved under the Constitution of the United States. The point here is the exercise of the Federal power in making a treaty.

Mr. SANDS. I do not see your point.

Mr. TAWNEY. The questions dealt with there are questions involving State rights.

Mr. SANDS. Yes.

Mr. TAWNEY. And not with respect to the treaty-making power.

Mr. GLENN. The whole question is whether they may make a treaty to abrogate the right of the State.

Mr. SANDS. Congress gave these rights to the State of Montana, and the State of Montana in turn gave these rights to the people, and if the treaty-making power can come in and set aside an act of Congress, then it follows that the treaty-making power is superior to the Congress. Further on this work illustrates the results that may follow. Would the gentlemen of the commission prefer to read this

for themselves or would they understand it better if I read in what I think bears on the case?

Mr. MIGNAULT. Personally I would be better satisfied to read it myself; however, you can do so if you want to.

Mr. GLENN. Mr. Sands has the right to read it if he wishes.

Mr. TAWNEY. We are all agreed on that.

Mr. SANDS. Possibly when you hear it read you will get a better idea of my meaning than if you read it yourselves.

(Mr. Sands continued to read from Tucker.)

Mr. SANDS. In other words, the Congress of the United States gave these waters to the State of Montana, and if the treaty-making power can set that aside, then it is superior to Congress.

Mr. TAWNEY. How do you apply this argument to the question before us? Do you mean to say that this commission would have the power to declare that this treaty was in violation of the Constitution of the United States, and therefore declined to act or declared that it was nugatory and of no effect as applied to the division of the waters of the St. Mary and the Milk Rivers? Do you expect us to hold that this treaty is unconstitutional?

Mr. SANDS. That reaches a very delicate question, which my friend Mr. Wyvell did not wish to raise at the present time.

Mr. TAWNEY. Do you think that the commission has that power? If it has not that power the argument is of no avail; we can not consider a question of the constitutionality of the treaty.

Mr. GLENN. I do not understand the argument in that way. Mr. Sands is taking the ground that the treaty is unconstitutional, and he is taking the ground that this treaty never was intended to cover a right of the State which has not been conceded to the General Government, and that the treaty power can not make a treaty with any other Government that will infringe the rights not given to the Federal Government.

Mr. WYVELL. And that knowledge, of course, was in the minds of the United States officials in framing the treaty.

Mr. TAWNEY. In the interpretation of the treaty, should the conclusion be reached that the language of the treaty itself includes tributaries, as it says tributaries of both countries, then if this provision is not the Constitution of the United States we can not act under the treaty at all, because the effect of our judgment would be that it was unconstitutional.

Mr. GLENN. I do not think the question bears on the unconstitutionality of the treaty at all.

Mr. TAWNEY. I wanted Mr. Sands's idea as to whether he expected the commission to hold on the constitutionality of the treaty.

Mr. SANDS. I must say that I, for myself, do not know whether this commission is a judicial or a purely administrative body. If it is a judicial body it has the right to construe the treaty and determine all these question. If it is simply an administrative body, it has not that authority. I do not know, but there is the situation. An administrative body would not have the authority. But I do go this far to say that it is a principle of law that where the agent of a party has not the authority to include certain elements in a contract, both parties are presumed to know that and to have contracted with that in view, and, therefore, if the Federal power had not the right to make a treaty respecting the waters in the State of

Montana—wholly within the State of Montana—then both parties are presumed to have known that and to have made the contract with that in view. You do not have to construe the treaty unconstitutional; you have to construe it with that idea in view. A corporation is organized in this State for the purpose of running a street car line, and a by-law provides that the officers shall have the right to make contracts with respect to that. If the officers of that company should make contracts wholly without the scope of the business of that corporation, such contracts would be nugatory and void, and the courts would say so. The courts would say that such contracts were void in whole or in part, void in respect to that part as to which the officials had no authority to enter into a contract.

Mr. TAWNEY. If the two Governments had intended to include all the tributaries in these streams in the two Canadian Provinces and in the State of Montana, the act would be *ultra vires*, and that provision of the treaty would be nugatory and have no effect?

Mr. SANDS. Yes, sir; and both parties are supposed to know that, and you would so construe it, and that is why what I am reading from this authority is very pertinent.

Mr. BIEN. I think Mr. Sands's point simply is that the treaty can not extend beyond matters which are subject to the treaty-making power, and, therefore, can not extend to waters that lie solely within Montana and do not cross the boundary, but it would apply fully to these waters which cross the boundary.

Mr. POWELL. Or, in other words, you say that in construing the treaty we must limit it to the matters as to which the Federal power of the United States has authority to treat?

Mr. BIEN. Exactly.

Mr. MIGNAULT. It is a fair argument to say that if there is any doubt about the language we will have to say the thing must be restricted, because, in our opinion, the treaty would be *ultra vires* of the United States. But then we would be doing something which, I understand, no court in your land has ever done.

Mr. SANDS. I take issue with you on that.

Mr. MIGNAULT. I may be wrong, but I would like to be advised on the subject.

Mr. SANDS. My statement of the law would be that, even though the language of the treaty or the contract were very definite, the parties would be presumed to know the law.

Mr. MIGNAULT. If the matter were clear, it would not be a matter of construction, but it would be a matter of setting aside a part of the treaty.

Mr. SANDS. It would be a matter of following the spirit of the treaty, because both parties are supposed to know what they did.

Mr. MIGNAULT. I would not say that, because if an illegal clause is put in a contract you might construe the contract as not containing that clause. I would say it is not a matter of construction; it is a matter of declaring void a contract which one or both of the parties had not the right to enter into.

Mr. POWELL. And your point, Mr. Sands, is that it is a matter of construction?

Mr. SANDS. That is my point. It is a well-settled principle of law, that no one will refute, that all parties in making a contract are supposed to know the law.

Mr. MIGNAULT. It is one of the most gratuitous assumptions of the law.

Mr. SANDS. It is often fallacious.

Mr. GLENN. You might cite your authorities, Mr. Sands, and we can read them.

Mr. TAWNEY. You or any other gentleman interested will have the right to submit a memorandum or a brief.

Mr. SANDS. I would like to read one point, which I marked, from page 84 of the same work.

(Mr. Sands read the paragraphs in question from Tucker.)

Mr. SANDS. I wish to say that last night an authority was submitted to you here from 100 United States reports which appears to hold contrary to my contention. That case is very carefully differentiated in this work, and it is said that that case does not sustain the point it was quoted to sustain before this commission. I will not read it to you, but I hope you will make note of it in chapter 6, and it is a branch of the case of *Hauenstein v. Lynham*.

I would say further that this author sums up the whole thing, and his conclusions are at page 422. In his summing up he sustains the point that I make very positively, and I may say that if the authority is good, and his reasoning seems very clear, I do not see how it can be otherwise than that you must sustain the point I make.

Mr. POWELL. I would like to hear your views on the actual division of the water.

Mr. SANDS. My view of the division of the water is, that under the provisions of section 6 of the treaty the waters of the two streams should be divided as follows: If there is 500 second-feet or less in the St. Mary, then the Canadians should take three-fourths of the total and the United States one-fourth. If there is over 500 second-feet up to 1,000 second-feet, the people of the United States should take the second 500 feet. That is to say, that when it reaches 1,000 cubic feet per second, then there is an equal division, and after that time there is an equal division. If there is 500 cubic feet in the stream the people of Canada would take 375 and the United States 125, even going further than that up to 667, Canada gets its full 500 second-feet. It has no further priority until the United States shall have received its one-half of the water of the St. Mary.

Mr. MAGRATH. And if there are 800 feet?

Mr. SANDS. The United States has 300 feet and Canada 500 feet.

Mr. POWELL. How about adding the two streams together?

Mr. SANDS. I would prefer that construction I have given.

Mr. POWELL. We have to consider the two streams as one.

Mr. SANDS. I do not see hardly how you are going to do it, because it looks to me as if it was giving a priority right of 500 feet on each stream and I think that was the intention of the treaty.

Mr. POWELL. You would concede that the prior apportionment in each case came out of the one-half?

Mr. SANDS. Yes; I think that prior apportionment only means the right to take it out first.

Mr. POWELL. And that the paramount principle of the two, namely, equal division and prior apportionment, is prior apportionment.

Mr. SAND. Yes; I think so.

CONTINUATION OF THE ARGUMENT OF W. B. SANDS.

PARTICULARLY INCLUDING CITATIONS FROM THE WORK OF HENRY ST. GEORGE TUCKER, ENTITLED "LIMITATIONS ON THE TREATY-MAKING POWER."

Restating the proposition advanced that the treaty should not be construed to include waters not international in character for the reason that the treaty-making power of the United States does not extend to the right to interfere with the private property of the citizens within the State where such property is and could not be a matter of international controversy. All persons are presumed to know the law, and in making the treaty all parties were presumed to know that it was not within the constitutional authority of the treaty-making power to include waters not international in character in the provisions of the treaty. It is not contended that the treaty is unconstitutional, but this point is urged simply to establish the proposition that the treaty should not be construed to include waters not international in their character.

It can not be disputed that if the provisions of Article VI of the treaty were construed to include waters not international in character, then it is the assumption of power over all such waters and is, in a sense, the taking of such property. It is too well settled to admit of argument that when a State or nation assumes to exercise control of property it must have jurisdiction over it. I assume that this is such a well-settled proposition that the citation of authorities is wholly unnecessary.

On page 84 of the work cited above I find the following statement:

The supremacy of the judicial power, of the legislative power, and of the executive power in the Federal Government in their respective spheres was complete and unchallenged, while the powers not delegated but which were reserved "to the States, respectively, or to the people" were left undisturbed by the Constitution as not needed by the Federal Government; and because the supremacy of the Constitution declared in Article VI pervades every part of it—and the tenth amendment is as much a part of it as Article VI or any other section of that instrument—the reserved powers contained therein are in their sphere equally supreme and subordinate to no other power in the Constitution.

And on page 85 I find along the same line:

To ascertain whether any power assumed by the Government of the United States is rightfully assumed the Constitution is to be examined in order to see whether expressly or by fair implication the power has been granted; and if the grant does not appear the assumption must be held unwarranted. To ascertain whether a State rightfully exercises a power we have only to see whether by the Constitution of the United States it is conceded to the Union or by that Constitution or that of the State prohibited to be exercised at all. The presumption must be that the State rightfully does what it assumes to do until it is made to appear how, by constitutional concessions, it has divested itself of the power or by its own constitution has for the time rendered the exercise unwarrantable. (Cooley's Constitutional Law, p. 31.)

75. But it is urged that the language of the Constitution placing the treaty-making power in the President and Senate, with no limitations upon its scope, but merely declaring that the President "shall have the power, by and with the advice and consent of the Senate, to make treaties, provided two-thirds of the Senators present concur," shows that there is no limit to the subjects or rights which may be incorporated in a treaty; that had the framers of the Constitution intended any limitations, they would have been made, just as the subjects

upon which Congress can legislate are specifically enumerated in the Constitution. A moment's consideration will show that the difference between the two is palpable. A treaty, generically, is an agreement or contract between two nations which may embrace any subject or right incident to the citizenship of either country. An enumeration of subjects or objects which could properly be contained in a treaty would therefore be practically impossible. But the legislative powers of Congress being few could be easily enumerated. Mr. Rawle, in speaking of this matter, says: "To define them (the subjects of a treaty) in the Constitution would have been impossible, and therefore a general term could only be made use of, which is, however, to be scrupulously confined to its legislative interpretation." (Rawle, *View of the Constitution of the United States*, 2d ed., p. 64.)

76. Mr. Calhoun says of this: "The reason is to be found in the fact that the treaty-making power is vested exclusively in the Government of the United States, and therefore nothing more was necessary in delegating it than to specify, as is done, the portion or department of the Government in which it is vested. It was then not only unnecessary, but it would have been absurd to enumerate specifically the powers embraced in the grant. Very different is the case in regard to legislative powers. The are divided between the Federal Government and State governments, which made it absolutely necessary, in order to draw the line between the delegated and reserved powers, that the one or the other should be carefully enumerated and specified; and as the former was intended to be but supplemental to the latter and to embrace the comparatively few powers which could not be either exercised at all or, if at all, could not be so well and safely exercised by the separate governments of the several States it was proper that the former and not the latter should be enumerated and specified. But, although the treaty-making power is exclusively vested, and without enumeration or specification, in the Government of the United States, it is nevertheless subject to several important limitations." (See chap. 1.)

77. It would be to convict the framers of the Constitution of a lack of foresight, which can not be properly imputed to them, to suppose they intended to give this treaty-making power unlimited scope to absorb every right of the people of the States against which they had so carefully guarded in the enumeration of the powers of Congress and by the reservations in the tenth amendment. The powers of Congress, the Executive, and the judiciary were enumerated in detail, and all powers not granted were, under the tenth amendment, reserved to the States or to the people, respectively. Of what avail is it to know that the framers of the Constitution securely preserved to the people their sacred local rights from the grasp of Congress, the President, or the judiciary if they can be absorbed under the treaty-making power? If the Federal Government can take them, it matters little what department may claim the right. A man who is robbed of a precious jewel of great price, dear to him by the ties of every sacred association, can not be comforted in his loss by the knowledge that a different person from the one he supposed to be the thief was really his despoiler.

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85. If we are to accept, therefore, the literal meaning of the words in Article VI, as applied to treaties, and give to them the supremacy which it is claimed the letter of the Constitution accords them, what is the result? In the first place, every power delegated to the Congress of the United States for its execution may be surrendered to the treaty power. The purpose which the framers of the Constitution had that the imposition of taxes, the regulation of commerce, the establishment of post offices and post roads, the coining of money, the naturalization of foreigners, and the like should be accomplished only through the action of representatives elected by the people of the States, and the Senators representing the States, is abandoned and the powers are surrendered to the President and the Senate in the making of treaties with foreign countries; in the second place, after providing, as was their intention, for a republican form of Government, it must be presumed they deliberately inserted Article VI to change that form to the government of an oligarchy; and, thirdly, that after they had determined in their wisdom to concede to Congress powers of legislation in certain particulars, and that all else was to be left with the States or the people, who were supposed to know better than anyone else what was best for them in their respective localities, they deliberately reversed their action and inserted this article, which might exclude their representatives in

Congress from a voice in any legislation, and give to the President and Senate the power to uproot and destroy what had already been conceded to Congress and the States. And all this results, it is claimed, because the word "treaty" may embrace any subject that pertains to the people as citizens of the State or Nation.

86. St. George Tucker, Story, Rawle, Willoughby, Pomeroy, and Cooley, and every reputable writer upon the Constitution declare that the treaty power can do nothing which tends to destroy the Constitution itself. Can it be doubted that the power to take away the right of Congress to legislate, or the right of the people of the States to regulate their own local affairs is the power to destroy the basic principles of the Constitution of our country?

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97. The power to contract and make treaties may be absolute and exclusive in the parties to the contract, but the subjects of that treaty may be personality or property rights, which under the constitution of one of the contracting parties, may rest as absolutely in the control of the agency of the government making the treaty as does the right itself to make the treaty. On the other hand, the same rights of person or of property may be lodged by the constitution of the other contracting party in some department of the government to which the constitution has confided its exclusive control, and neither the treaty power of the government nor any other power can control, concede, or contract away such rights.

In the famous controversy over the enactment of a law in the State of California to place Japanese children in separate schools from white children, Senator, then Secretary, Elihu Root, presented the views of this Government in an elaborate brief, but the controversy never reached the courts. In the discussion of that subject in the work of Limitations on the Treaty-Making Power, I find as follows, commencing on page 381:

Against Senator Root's exclusion of the States from any consideration, when the treaty power enters the arena and seeks subjects for its exercise, we place the long list of opinions expressed on this subject by statesmen, writers, and judges of the Supreme Court which are collected in Chapters I and II, to which the reader is referred. Among these we will cite again Judge Story's statement: "But though the power is thus general and unrestricted, it is not to be so construed as to destroy the fundamental laws of the State. A power given by the Constitution can not be construed to authorize a destruction of other powers given in the same instrument. It must be construed, therefore, in subordination to it; and can not supersede or interfere with any other of its fundamental provisions. Each is equally obligatory, and of paramount authority within its scope; and no one embraces a right to annihilate any other. A treaty to change the organization of the government, or annihilate its sovereignty, to overturn its republican form, or to deprive it of its constitutional powers, would be void; because it would destroy what it was designed merely to fulfil, the will of the people." (Story on the Constitution, 1508.)

And also Judge Cooley's statement: "The Constitution imposes no restriction upon this power, but it is subject to the implied restrictions that nothing can be done under it which changes the Constitution of the country or robs a department of the Government or any of the States of its constitutional authority." (Cooley's Principles of Constitutional Law, p. 117.)

And also a paragraph from Judge Field's opinion in *Geofroy v. Riggs* (133 U. S., 267): "The treaty power, as expressed in the Constitution, is in terms unlimited, except by those restraints which are found in that instrument against the action of the Government or of its departments, and those arising from the nature of the Government itself and of that of the States. It would not be contended that it extends so far as to authorize what the Constitution forbids, or a change in the character of the Government or in that of one of the States, or a cession of any portion of the territory of the latter without its consent." Why should Judge Field hesitate at "a change in the character of" a State in the making of treaties if the making of treaties was to be carried on as if the States did not exist.

* * * In the first place it is admitted by all that some of these rights were granted by the States to the Federal Government in the Constitution. These are no longer subject to State power; they have been surrendered to the Federal Government. But those not granted remain with the States or the people. Where else could they abide, since they were never granted? And how can powers never granted by the States be under the control of the Federal Government? The ungranted powers of the States can no more be subject to the Federal Government than were the States of Rhode Island and North Carolina subject to the Federal Government for months after the adoption of the Constitution, because they had not consented to it or ratified it; and there was no power to compel their assent. And so these ungranted powers which belong to the States are no more under the control of the Federal Government than they are under the control of the Government of Great Britain. Their security rests, first, in the fact that they are original powers never surrendered by the States, and this fact is recognized by the tenth amendment, which recites in words what is stated above as to all State powers which are not granted to the Federal Government or prohibited to the States. This amendment constitutes no grant of power, but is merely the statement of an existing fact which was put in writing to avoid further misunderstanding; second, some of these reserved rights involve the essential principles of civil and religious liberty which the people enjoyed as citizens in their respective States, and to make sure that these should never be taken from them by the new Government which was being formed, many of them were incorporated in the first 10 amendments, so that these latter have a double security in that they are original powers never granted to the Federal Government by the States and are placed in the amendments that they may be secure against loss from the Federal Government. * * * To this position it may be answered that when the unlimited and unrestrained grant was made to the President and Senate to make treaties it carried necessary implication all State powers necessary to make such grant complete. If this is true the argument and conclusion may be stated as follows:

1. The grant of the treaty power is unrestrained and unlimited.
2. The nature of the grant requires that all that is necessary for its completeness was by implication carried in the grant.
3. That national powers assigned to different branches of the Federal Government in the Constitution may be needed by the treaty power. If so, such national powers were by implication carried in the grant to the treaty power.
4. The reserved powers of the States may also be needed by the treaty power looking to its complete development. If so, all of them needed were by implication carried in the grant.

The inevitable conclusion from this argument is that since all the Federal powers and all reserved State powers may be needed by the treaty power in order to its complete and symmetrical development, they were necessarily implied in the grant of that power, and this being true, the government is changed from a government under the Constitution—in accordance with its distribution of powers—to a government under the treaty power. Or, if we exclude from consideration the grant by implication to the treaty power of all national powers secured in the Constitution, and only consider the grant by implication of the reserved rights of the States to that power, this result follows: That the States granted to the Federal Government a power, in the treaty power, which by implication carried every reserved right of the States. Is such a result consistent with the conditions upon which the Constitution was originally ratified by the States? If such argument be accepted, why did the States exhibit such uneasiness at the time of the ratification of the Constitution about the adoption of amendments to secure these very rights, which, under the argument above, are claimed to have been given away? Why did Massachusetts declare that in order to quiet the fears of her people an amendment looking to the preservation of these very rights was to be practically a condition upon which she ratified the Constitution? Why did New Hampshire, Rhode Island, New York, Virginia, and South Carolina demand as a condition of their ratification that an amendment to secure these very rights should be adopted at once, if they had by their ratification surrendered them to the treaty power, as claimed? It is readily seen that the effect of such argument could only result, not only in the destruction and annihilation of the States, but in the downfall of the Federal Government itself. Judge Cooley, in speaking of the mode of construing statutes (Constitutional Limitations, 7th ed., p. 91), says:

"The rule applicable here is that effect is to be given, if possible, to the whole instrument and to every section and clause. If different portions seem to conflict, the courts must harmonize them, if practicable, and must lean in favor of a construction which will render every word operative rather than one which may make some words idle and nugatory. This rule is applicable with special force to written constitutions * * *. It is scarcely conceivable that a case can arise where a court would be justified in declaring any portion of a written constitution nugatory because of ambiguity. One part may qualify another so as to restrict its operation, or apply it otherwise than the natural construction would require if it stood by itself; but one part is not to be allowed to defeat another, if by any reasonable construction the two can be made to stand together."

331. An examination of the first ten amendments to the Constitution will add additional strength to the views advanced on this subject which bear upon the position taken by Senator Root. These amendments are commonly spoken of as the bill of rights of the Constitution. They represent also the redeemed promises of the makers of the Constitution to the people of the country, and it may be well doubted whether the Constitution would ever have been finally adopted without the promise of a speedy response to the demands of the people as represented in these amendments. An examination of them shows that they represent the great fundamental principles of civil, political, and religious liberty that the people were unwilling should be left to change or impairment by the Federal Government, and the courts have held from the earliest decisions down that these amendments embodied rights and principles which pertain to the people of the States, and that they were not intended to circumscribe or limit the powers of the States in reference thereto, but were adopted as a restraining force upon the powers of the Federal Government as to their use or abuse.

Justice Harlan, in his dissenting opinion in *Twining v. New Jersey* (211 U. S. 118, 53 ed., 97; 29 S. C. 14), said of these amendments:

"The original amendments of the Constitution had their origin, as all know, in the belief of many patriotic statesmen in the States then composing the Union, that under the Constitution, as originally submitted to the people for adoption or rejection, the National Government might disregard the fundamental principles of Anglo-American liberty for the maintenance of which our fathers took up arms against the mother country."

Chief Justice Waite has well stated the principle in *Spies v. Illinois* (123 U. S., 166; 31 L. ed., 80; 8 S. C. 21), when he said:

"That the first 10 articles of amendment were not intended to limit the powers of the States governments in respect to their own people, but to operate on the National Government alone, was decided more than half a century ago, and that decision has been steadily adhered to since."

He also quotes *Barron v. Baltimore* (7 Pet., 247, 8 L. ed., 672), and a large number of other cases.

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333. The Supreme Court has universally recognized the fact that the amendments from 2 to 8, inclusive, contain rights, which in their nature belong to the people, under the control of the States, and that the adoption of these amendments was not for the purpose of curtailing the power of the States in their application of the principles contained in them, but it was for the purpose of rendering certain that in the Government, which was then being constructed, these rights should remain unimpaired in the States, and free from the touch of Federal power in their administration. "The right of the people to keep and bear arms shall not be infringed" (amendment 2) may be changed or modified by the States, but the Federal Government is forbidden to do either. "No soldier shall, in time of peace, be quartered in any house without the consent of the owner," etc. (amendment 3). The State may quarter soldiers in the time of peace in the houses of its citizens without their consent, if allowed by its own constitution, but the Federal Government can not. "The right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures, shall not be violated" (amendment 4). The State may exercise the right of search, the State may invade the home, seize the papers and effects of its citizens, if allowed by its own constitution to do so, but the Federal Government must not. "No person shall be held to answer for a capital or otherwise infamous crime, unless on a presentment or

indictment of a grand jury" (amendment 5). The State may do this, if agreeable to its own constitution, but the Federal Government can not. (*Eilenbecker v. Plymouth County*, 134 U. S., 31; 33 L. ed., 801; 10 S. C., 424.) And so through all the other amendments referred to, it is seen that while the rights secured in them, being rights which belong to the States, may be secured, changed, or altered as the States may determine under their own constitutions, they are free from the touch of the Federal Government except so far as State action may be restrained by the fourteenth amendment. And to make it doubly sure that the rights secured in the amendments were not all that were intended to be secured from the interference of the Federal Government, the ninth amendment was adopted. "The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people," and then follows the tenth amendment.

Now, when Chief Justices Marshall, Chase, and Waite declare that these amendments were intended only to operate on the National Government, in restraining it from invading these sacred rights and privileges therein secured, by what process of reasoning can it be held that the treaty power, one of the branches of the Federal Government, may be so used as to embrace and include in its exercise those rights and privileges? Is not the treaty power, when exercised, a part of the National Government? If the National Government is denied the right, how can the treaty power, which is a part of it, claim to be exempt from that prohibition? And how could such a claim consist with Judge Story's statement that, "A power given by the Constitution can not be construed to authorize a destruction of other powers given in the same instrument?" If the treaty power may embrace the subject of these amendments, which the Supreme Court has held were the subjects of State power, which the National Government can not touch, may not such rights and privileges secured to the States be absolutely destroyed?

It would seem, therefore, that the reserved powers of the States, having never been given up to the Federal Government, or no more subject to that Government than they are to the Government of Great Britain. While such of these rights as are secured against Federal interference by the amendments are doubly secured from Federal control, and these can never be reached by the treaty power until it has been judicially determined that that power is superior to the Constitution itself. Our conclusion, therefore, is that the treaty power, which has been granted to the Federal Government, carrying with it apparently all freedom from restraint in the choice of subjects for its exercise, is limited by clear implication and a reasonable construction of the Constitution, by the provisions of the above amendments and of the Constitution, as well as by the reserved powers of the States.

DID THE TREATY-MAKING POWER OF GREAT BRITAIN EXTEND TO THE RIGHT TO MAKE A TREATY RESPECTING PROPERTY RIGHTS NOT A SUBJECT OF INTERNATIONAL CONTROVERSY OF INDIVIDUAL CITIZENS OF THE DOMINION OF CANADA?

On page 107 of the author quoted above we find this language used: The sacred rights of citizenship secured to the American citizen in our Constitution can not be taken from him under a treaty, nor even by legislative action, for they are secured in the Constitution itself. Like examples could be deduced from the constitutions of Great Britain, France, Prussia, Belgium, etc. The rights secured to the people of America in the fourth, fifth, and sixth amendments to the Constitution, to be secure from unreasonable search; immunity from the charge of a capital or infamous offense except by presentment or indictment of a grand jury; the security of life, liberty, or property under due process of law; trial by an impartial jury; the right of habeas corpus can never be modified or taken from the American citizen under the provisions of a treaty with any country. They are beyond the reach of Government, because embedded in the Constitution and can only be taken away by amendment to the Constitution. Most of these rights above enumerated are secured to the

people of Germany, France, or Japan under their constitutions. They boast their muniments of civil liberty for their citizens equally with those of the United States; but how different they stand from each other, for the Constitution of each of those countries may be changed by legislative enactment, and these fundamental rights may be swept out of their constitutions by such act. Not so with these rights secured to the American citizen. Should a legislative act attempt to annihilate any one of them, it would be declared at once null and void, and the cumbrous process of an amendment to the Constitution would successfully check any effort to destroy it. The Czar of Russia with his limitless power and unrestrained will might destroy all of the rights of his subjects by treaty agreed to between him and some other high contracting power. It is even claimed that the King of England may exercise this power without restriction; that the Emperor of Germany or of Japan may do the same. This is not a just conclusion. The power of the Czar of Russia and the King of England to negotiate treaties is not the same. The one under an absolute monarchy and the other under a constitutional monarchy may each exercise the right to make treaties according to the constitution of their own country.

99. The *Parlement Belge*, an English case decided March 15, 1879 (English Law Reports, Probate Division. Vol. IV, p. 1490), involved the question of how far a treaty between Great Britain and Belgium, extending immunities to foreigners which affected the private rights of British citizens, was valid without an act of Parliament. The opinion in the case was delivered by Sir Robert Phillimore, an eminent judge, and his opinion is quite pertinent to this discussion. He said in part:

"I now approach the consideration of the second question, viz, whether the convention between Her Majesty and the King of the Belgians, ratified on the 24th of March, 1876, does, so far as this country is concerned, place the *Parlement Belge*, while in British ports, in the category of a public ship of war and exempt her from the process of an English court.

"I may observe in passing that the very fact that this packet is in terms given by the convention the privileges of a ship of war in British ports and there only tends to show that she had not such privileges by general international law, and that a convention was deemed necessary to confer them.

"It is admitted that this convention has not been confirmed by any statute, but it has been contended on the part of the crown both that it was competent to Her Majesty to make this convention and also to put its provisions into operation without the confirmation of them by Parliament. The plaintiffs admit the former, but deny the latter of these propositions.

"The power of the Crown to make treaties with foreign states is indisputable. Passing by other authorities, I will cite the language of Blackstone, who was not disinclined to maintain the prerogative of the Crown. He says:

"It is also the King's prerogative to make treaties, leagues, and alliances with foreign states and princes, for it is by the law of nations essential to the goodness of a league that it be made by the sovereign power; and then it is binding upon the whole community; and in England the sovereign power, quoad hoc, is vested in the person of the King. Whatever contracts, therefore, he engages in, no other power in the kingdom can legally delay, resist, or annul. And yet, lest this plenitude of authority should be abused to the detriment of the public, the constitution, as was hinted before, hath here interposed a check, by the means of Parliamentary impeachment, for the punishment of such ministers as from criminal motives advise or conclude any treaty which shall afterwards be judged to derogate from the honor and interest of the nation."

"The learned writer, however, was certainly aware that this general proposition must receive some modification and restraint besides that which he has mentioned. Blackstone must have known very well that there were a class of treaties the provisions of which were inoperative without the confirmation of the legislature, while there were others which operated without such confirmation. The strongest instance of the latter, perhaps, which could be cited is the

Declaration of Paris in 1856, by which the Crown in the exercise of its prerogative deprived this country of belligerent rights, which very high authorities in the state and in the law had considered to be of vital importance to it. But this declaration did not affect the private rights of the subject; and the question before me is whether this treaty does affect private rights, and therefore required the sanction of the legislature.

"The authority of Chancellor Kent was relied on. (Kent's Comm., vol. 1, p. 166, ed. 1873.) That learned writer observes:

"Treaties of peace when made by competent power, are obligatory upon the whole nation. If the treaty requires the payment of money to carry it into effect, and the money can not be raised but by an act of the legislature, the treaty is morally obligatory upon the legislature to pass the law, and to refuse it would be a breach of public faith."

"And he further observes:

"There can be no doubt that the power competent to bind the nation by treaty may alienate the public domain and property by treaty."

"He then refers to the case of the United States v. The Schooner *Peggy* (1 Cranch, 103, pp. 149, 150).

* * * * *

"The judgment in the case of The United States v. The Schooner *Peggy* does not establish the proposition that the Crown can dispose of the rights of a subject without the sanction of Parliament. The treaty may contain provisions which are ultra vires of the prerogative, in part valid and operative, and in part invalid and inoperative. A treaty is, indeed, not necessarily void by reason of the infraction of some of its conditions though it may be voidable; and the validity of it can not be challenged, speaking generally, by any private person; but a court of justice when called upon to execute the provisions of a treaty may, at the instance of the subject, who is affected by them, examine whether those provisions are such as to be capable of legal enforcement, just as it may inquire into the validity of letters patent granted by the Crown (*Long v. Bishop of Capetown* 1 Moo. P. C. n. s. 411); and also the validity of an order in council duly passed and gazetted (*Attorney General v. Bishop of Manchester* Law Rep. 3 Eq. 463). There have been, not to go farther back, during the reign of her present Majesty, various treaties confirmed by parliament; and by statute power has been given to the Crown by order in council to do certain things which it must be presumed without such power it could not have done, for instance, the merchant shipping act, 1862 (25 and 26 Vict. c. 63), empowers the Crown by order in council to make rules and regulations respecting collisions and salvage services to be binding on the ships of foreign States; the sea fisheries act, 1868 (31 and 32 Vict., c. 45), relating to a convention between France and England as to sea fisheries and reciting (in s. 66) that doubts had arisen whether part of the convention between the United Kingdom and France of January, 1826, relating to exemption from dues had been confirmed by Parliament, proceeded to give such confirmation; and to provide that where similar convention should thereafter be concluded with any foreign country Her Majesty should have power by order in council to confer exemption from dues on sea fishing vessels belonging to such foreign country; the 35 and 36 Vict. c. 45, A. D. 1872, confirms the treaty of Washington between the United States and England, and as will presently be seen the very treaty of which this Belgian treaty is a sequel was confirmed by statute. Some of the treaties confirmed relate to the payment of and exemption from dues in harbors; one more, and not an insignificant one, will presently be added. I mention them merely as illustrative of the position that certain treaties do require Parliamentary confirmation (pp. 152, 153).

* * * * *

"If the Crown had power without the authority of Parliament by this treaty to order that the *Parliament Belge* should be entitled to all the privileges of a ship of war, then the warrant which is prayed for against her as a wrongdoer on account of the collision can not issue, and the right of the subject, but for this order unquestionable, to recover damages for the injuries done to him by her is extinguished.

"This is a use of the treaty-making prerogative of the Crown which I believe to be without precedent, and in principle contrary to the laws of the constitution. Let me consider to what consequence it leads. If the Crown, without the authority of Parliament, may by process of diplomacy shelter a foreigner from the action of one of Her Majesty's subjects who has suffered injury at his hands,

I do not see why it might not also give a like privilege of immunity to a number of foreign merchant vessels or to a number of foreign individuals. The law of this country has indeed incorporated those portions of international law which give immunity and privileges to foreign ships of war and foreign ambassadors; but I do not think that it has therefore given the Crown authority to clothe with this immunity foreign vessels which are really not vessels of war or foreign persons who are not really ambassadors.

"Let me say one more word in conclusion. Mr. Bowen, in his very able speech, dwelt forcibly upon the wrong which would be done to this packet if, being invited to enter the ports of this country with the privileges of a ship of war, she should find them denied to her. I acknowledge the hardship, but the remedy, in my opinion, is not to be found in depriving the British subject without his consent, direct or implied, of his right of action against a wrongdoer, but by the agency of diplomacy and proper measures of compensation and arrangement between the Governments of Great Britain and Belgium. I must allow the warrant of arrest to issue" (pp. 154, 155).

The constitution of each country must be examined to ascertain in what department of the Government the subjects which are proposed in the treaty are lodged. If they are controlled by another branch of the Government than that to which the power to make treaties is given, then a treaty that seeks to incorporate such subjects in its provisions will not be valid until the assent of that department is given to it. This principle applies to all Governments and is recognized by all European powers (p. 113).

I have not other authorities at hand sufficient to warrant the assertion that the construction of the treaty which included waters not international in character on the Canadian side was not within the treaty-making power that executed the treaty in behalf of Great Britain, but it is safe to say that, the subject being so uncertain, it is only fair to use that construction of the treaty which would eliminate those uncertainties. In other words, when two constructions are possible, and one of these constructions might make the treaty unconstitutional in part only, that construction ought to be adopted which would eliminate the uncertainties unless it clearly appeared that the other construction was adopted after due deliberation and consideration. Testimony here does not show that the question of the inclusion of waters wholly within the Canadian boundary was a matter of specific consideration by the emissaries of the British Government.

In conclusion I respectfully urge upon this commission that this treaty was entered into in utmost good faith by the United States, and, as I believe, by the parties in interest on the other side of the line. The conduct of all parties would indicate that they construed the treaty to include only the waters that flow across the international boundary. The after conduct of the people of the United States in spending \$3,000,000 to bring the waters of the St. Mary River into the basin of the Milk River is the very strongest proof of their construction of the language of the treaty. We have already spent \$5,000,000 in preparing to use the waters of the St. Mary River. If the construction maintained by the Canadians is accepted by this commission, that expenditure would be almost a total loss, as is shown by the records, and by the proposed method of division of the Canadians we could expect very little water from St. Mary River, certainly not enough to justify the expenditure of any considerable sum of money. That provision of the treaty which provides for the use of the channel of the Milk River for the conveyance of waters from the St. Mary River to the irrigable lands in the Milk River Valley in the United States might well be eliminated from the treaty.

By the testimony submitted it is shown that the measurements of these two streams, the St. Mary and Milk Rivers, are of almost equal flow, but the testimony further shows that they do not include a very large flow of water diverted from the tributary streams on the American side before they reach the main stream, or other places where measurements were made, and therefore that the Milk River is a much larger stream than the St. Mary. Such being the case, an equal division of the water would not authorize the diversion of any water from the St. Mary River on the American side. The construction of the treaty as contended by the Canadians must do violence to the preamble to Article I of the treaty, to the negotiations which preceded the making of the treaty, to the Constitution of the United States and perhaps that of Great Britain, besides requiring a practical impossibility in providing for an equal division of the waters, since it would require all the waters of the St. Mary and all the waters of the Milk River, international in their character, to make up the one-half provided for by the treaty to be given to Canada. In other words, the treaty would mean in effect that all the waters of the St. Mary, and all those of the Milk River which could possibly be diverted into Canada, should belong to Canada, and there would be no need for a treaty or a commission to divide the waters. The treaty might as well have read that the Canadians were entitled to all of the St. Mary waters and all of the Milk River waters that could be diverted, which leads to an absurdity, and we therefore again insist that the only proper construction of the treaty is to limit the tributary waters to include only those that flow across the international boundary.

AFTER RECESS.

The commission reconvened at the expiration of the recess, 2 o'clock p. m., all the members being present.

Mr. TAWNEY. Gentlemen, we will proceed now.

ARGUMENT BY C. S. MACINNES, K. C., ON BEHALF OF THE
DOMINION OF CANADA.

Mr. MACINNES. May it please the commission, I am called upon in behalf of the Government of the Dominion of Canada to deal with certain contentions which have been raised before you here with reference to this matter by my learned friend, Mr. Wyvell, during the course of the proceedings when he has laid before you in writing certain contentions to the effect that the waters to be dealt with by you under Article VI were to be cut short at the boundary line; also that any tributary streams wholly within either country were not to be considered by you. A further point was raised that in connection with the measurement and apportionment by you you were to consider only waters that are being used from time to time and you were not to regard or to consider, or to give direction now with regard to waters which may be used by either country and which can be used and which to my mind within the clear language of the article are to be used by them in accordance with the rights given to them by the article.

I have also to deal with a very lucid presentation, if I may be allowed to say so, by Mr. Bien to-day along the same lines, placing

before you his view, or his official view while appearing before you as counsel for the Reclamation Service of the United States Government. Mr. Bien's contentions, as I understood them, were very much to the same effect as those stated in a memorandum placed before you by Mr. Wyvell. The arguments in support of them with which I shall deal were, I may state now, all contained in material extraneous to the language of the article itself, with the single exception of the suggestion that the words inclosed within brackets had the effect of limiting the language to waters of streams in Montana, Albert, and Saskatchewan. Therefore, the only argument on the language itself to be met there would be on that point. That, with all respect to my learned friend, Mr. Bien, is, I think, self-answered because there are and can be, for geographical reasons, no waters which flow through Montana and Alberta and Saskatchewan.

The contentions, therefore, raised both by Mr. Wyvell in that memorandum and by Mr. Newell are contended for by material outside of the language of the treaty itself.

I have also to deal with certain observations presented to you by Mr. Sands, who appears, I understand, for certain water users of the lower Milk River Valley, in Montana. Mr. Sands naturally covered the same points, to a certain extent, and he also raised a constitutional point with which he dealt briefly yesterday and in full this morning. If that were the whole situation, Mr. Chairman, I would be able to deal with it without great difficulty, I think, or without embarrassment. I have, however, to deal also with certain verbal observations which fell from the lips of my learned friend, Mr. Wyvell, yesterday afternoon, and I am bound to state to the commission that some of those statements have caused me a great deal of embarrassment. I am, however, hopeful that by reason of the wholly different atmosphere which was created by the language of Mr. Bien, who appeared for the Reclamation Service of the United States Government this morning, those difficulties may be and can be removed and this embarrassment disappear.

I would like to make a general statement with which I am sure my learned friends and the officials and officers on both sides will agree. We are appearing here before you, sirs, as an International Joint Commission, as was pointed out by the chairman in his opening remarks, a commission appointed under a treaty between the United States and Great Britain, acting on behalf of the Dominion of Canada. The subject matter with which we have been dealing has been one in controversy or under discussion between those countries and between the United States and Great Britain on behalf of Canada, and at times Canada itself, from 1896 until this treaty was made, signed in January, 1909, and ratified in May, 1910. That treaty, which dealt with the subject matter, was, of course, the same treaty under which this commission was constituted. During the course of those discussions the matter came under the hands of some of the most distinguished men in all three countries. Under these circumstances I feel a very grave responsibility in dealing with this matter, because I feel—and, as I say, I do not think that I am monopolizing the views of one side, but that they will be concurred in by both sides—that this matter should be presented before this commission on a plane worthy of the dignity and importance of the commission and of the matters with which we are dealing. I therefore am

anxious, and I think my learned friends will be anxious, that the matter should be dealt with without any undue partisan spirit and in a spirit of conciliation rather than aggression, and if by any chance I or any of us should not be able to measure up to this grave responsibility, that it will not be a matter for return in kind but an endeavor to create an atmosphere which will enable this matter to be dealt with.

Now, as to the situation of Canada in this matter. We are here before you, and we are content to receive your directions. In fact, we desire those directions, and desire that it should be made clear that there should be no uncertainty on this subject. No question of jurisdiction is raised in any way, shape, or form on behalf of Canada.

The embarrassment to which I referred is this: My learned friend during the course of the proceedings of the second day raised certain contentions before you. As I stated before, those are contentions which, while I do not agree with them and which I hope I can answer to your satisfaction, I can not understand. In his remarks last night he made—and this is where I sincerely hope that the matter can be cleared up—certain statements which may have been personal, and which I feel that I am bound to assume were personal, not to myself, but personal to himself and personal as contradistinguished in any way from official. That is to say, I understood my learned friend to state to the commission that if the contentions put forward by him were not acceded to by this commission that this would not be the end of this matter, but it would be the beginning of a new controversy which would be started between the two countries and which would eventually end at The Hague or before some other tribunal and create a condition of uncertainty and of dispute between the two countries.

Now, gentlemen of the commission, I venture to say that I am correct in feeling that that can not be the official position of the United States Government, because if it were thought that there were any question of jurisdiction involved in this matter, that this is a matter with which the commission should not deal, that would have been presented to you and would have been so stated that—I use the language in no offensive term—as a threat, but in a dignified manner, supported by grave arguments, to show that while this commission has certainly on the appearance of it and, to your understanding, the jurisdiction to deal with this matter, that there is some question between the two countries which is not and will not be allowed by the United States Government to be solved by this commission. I therefore, in dealing with these arguments, felt bound to assume that the United States Government is in fact and officially in the position as indicated by the written memorandum of my learned friend Mr. Wyvell, and as also presented to you by Mr. Bien. That is to say, that the matter is left with this commission and that the decision of this commission will be as binding upon one country as upon the other. I shall therefore now take up these different contentions and deal with them as briefly as I can.

First of all, with regard to the contention that the waters dealt with by Article VI are cut short at the boundary, so that the portions below the boundary are excluded; and, secondly, that the tributaries arising within either country are wholly excluded. I repeat here what I said before, that it must be common ground that there is nothing in the article itself to justify any such contention. You have, therefore, with you a situation where you have language to deal with

which is perfectly clear in itself, and which is contended on behalf of my learned friends must be varied on account of extraneous reasons. I think it will shorten the argument if I explain—although I do not think it needs argument—that in addition to the language of the article as to the waters the other provisions of the article make it more abundantly clear, if that be necessary, that the explicit language of the article as to the waters themselves is the meaning and the only meaning of that article.

The situation is this, and I will paraphrase, because it is not necessary to quote the language of the article: These two rivers and their tributaries were to be dealt with as one river. Each country was to have a share not in one or the other, except as to the prior appropriations, but there was to be a common watershed as to which there was to be a joint arrangement, and certain prior appropriations were to be allowed on that watershed treated as one, some of those prior appropriations being in Canada, north of the boundary, and the others on the United States side in Montana, after the river had crossed the boundary. Furthermore, there was to be allowed by Canada to the United States the use, subject to the provisions of Article II only, of the channel of the Milk River for 215 miles in length in Canada and in wholly Canadian territory, a use which under any interpretation or under any international law applicable to such waters could not be claimed either on the ground of international law or comity, except possibly extending comity to grounds of agreement as may be the case, perhaps, with regard to waters which flow from one country to the other.

Let me repeat that again, because it has not been referred to by my learned friend, and it seems to me to be one of the most vital and obvious points if additional support is necessary. You have here the use granted by one country to the other of a canal purely within its own territory. The situation, therefore, in a word, is this: The express international waters have been used. I do not quite know what my learned friend means by this. I gather that he means waters which flow from one country to the other, but as to that I do not think there is any such technical phrase. The situation here is that there was an international difficulty with regard to the two countries and with regard to the use of the waters in both of those countries, including some of the tributaries in those countries, and that that was dealt with as the solution of the matter, not on an international basis or with the application of international law, but on a national basis. In other words, that a national solution was found, not with respect to international waters but with respect to national difficulty. Prior appropriations dealt with it as if it were all on one watershed, so that one country loses to the other something with which international law has no concern.

The other meaning of this article as covering all the water is this; that the tributaries of the Milk River are included and expressly included in Alberta and in Saskatchewan. My learned friend, Mr. Bien, said that the result of the inclusion of the words "and Saskatchewan" is that it includes the tributaries flowing from Canada into the Milk River and those are spoken of as tributaries of the Milk River. Now, my learned friends at the same time contend that these rivers are cut short for purposes of this article at the boundary. But if the commission will only look at the map they will see at a

glance that those tributaries in Saskatchewan are only tributaries of the Milk River, if the Milk River is considered as extending beyond the boundary. All of these tributaries join the Milk River long after it has passed the boundary line. So that to give effect in any way to the language of the contention of my learned friends would be to act not only contrary to the language of the treaty with regard to the inclusion of all the tributaries and all the rivers and not some of the tributaries and a part of the rivers, but it would also do violence to the subsequent language of the treaty.

Now, then, let us see what are the arguments which have been raised to the contrary. The main arguments put before you were based upon not the historical documents which were put in in connection with the history of this matter, but with regard to the negotiations which passed between the two countries after two officers of the two countries had been appointed to deal with this matter and reach a conclusion with the assistance of the diplomatic or State officers of both countries. The commission will remember that my learned friend insisted on the introduction of that material and that I objected to it. I might say perfectly candidly that I felt in duty bound to object to that, because this is not the only matter that will come up before this commission, and it seemed to me, from what I know, which I grant you may be very little, of dealing with such matters between two countries, that there ought not to have been imported into the consideration of this matter what passed between the diplomats. However, my learned friend put it in after I warned him that he put it in at his peril. He is basing his argument upon it. I am prepared to meet it, and I think that, so far as aiding his contention is concerned, the result is absolutely to the contrary. I do not intend to take the commission through all of the diplomatic documents, but shall deal only with the points which have been raised by my learned friend.

It was stated that what was called the Root proposals of June, 1907, supported the contention that this Article VI was limited. I think, however, that if those proposals are read, the contrary conclusion is to be reached, because it will be found that while reference, it is true, is made to the measurement of some of the waters at the boundary, the provisions with respect to those waters are not for the purpose of arriving at a division of the total waters between the two countries, but with reference to the delivery of certain parts of the share of the two countries, which is a wholly different matter, because, so far as delivery is concerned, it would obviously take place at the boundary or within the territory of either country. But where it is a measurement of the total waters to be divided, that is a different matter. Under the Root proposals the amount which was to be taken into consideration for the purposes of delivery was limited to the flow in each case, and not in excess of 2,000 cubic feet per second. The balance of the excess waters was to be divided equally between the two countries, but it was decided that no more should be taken into account, possibly owing to the situation at the time, or possibly it was considered that it was unnecessary to do so. Further than that, the Root proposals, when dealing with the prior appropriations, dealt explicitly with the entire Milk River system and the entire St. Mary River system. That is the language which was used.

The next paper referred to was a memorandum which, it was said, was exchanged by Mr. Campbell, who was an official of the Department of the Interior, on the 30th of December, 1908. If that memorandum is looked at, it will be found that the proposal also suggested is one entirely different from Article VI. The suggestion there was that the two rivers should not be dealt with jointly, but should be dealt with separately, and that instead of having any prior appropriations the prior appropriations should be wiped out altogether, and that you would be simply dealing with certain rivers and would divide them at the boundary line and divide them separately. That, however, was not accepted by the United States, possibly on account of the interests in Montana that it was desired to protect more clearly and absolutely by a provision as to prior appropriation. Anyhow, that proposal is a totally distinct suggestion to anything that we find in Article VI.

Then my learned friend put in "Exhibit B," which is stated by my learned friend to be an original draft by Mr. Chandler P. Anderson, of the State Department. My learned friend has also stated here—I submit, with all respect, that it was not usual, to put it mildly, to do so—that Mr. Anderson's view was that he had in mind measurement at the boundary. If my learned friend had not said that, I should not have said anything. I suppose, however, that I am bound to state that the view held by the negotiator on the other side, Mr. George Gibbons, as it then was, and Sir George Gibbons now, was entirely different, and that the other negotiator, Dr. King, put himself on record in an official publication in the Dominion of Canada, after the treaty was signed, it is true, but before it was ratified in November, 1909, absolutely to the contrary and to the effect that all the waters had to be included and measured for the purpose of the treaty.

Now, nobody will doubt—I certainly have no doubt—that anything that Mr. Chandler P. Anderson may say is true, but I think that my learned friend himself has supplied the solution. He has put in here before you this draft, Exhibit 16B, which was submitted by Mr. Anderson and which contains this language:

It is agreed that each country shall have the exclusive right to one-half of the natural flow of the St. Mary and Milk Rivers and their tributaries, the amount thereof to be determined at the points of storage and diversion and at the boundary by measurement, etc.

So it is clear that measurement at the boundary was in Mr. Anderson's mind at one time, at the end of 1908 or at the beginning of 1909, and it is also shown that when he had that idea in his mind he was able to express it in very clear and lucid English, and that subsequently, when the article is prepared and agreed to—why the change was made we do not know, but it certainly was made—those words are left out. So that on my learned friend's own material it seems perfectly clear that it is not open to him to found any argument on these documents; but, quite to the contrary, that he is, so to speak, hoisted with his own petard.

Then it is said—frankly I am unable to follow it, and do not wish to labor the point—that there is something in Article II which is such as to overrule Article VI. I presume, to put it at the highest, the idea is this, that there is a statement in Article II as to the views of

the two countries as to rivers which flow across the boundary and are not boundary waters. But that surely does not disturb Article VI, which specifically deals with a certain subject matter, and which deals not only with waters flowing across the boundary but with all the tributaries and with a canal entirely in one country.

Then Mr. Bien dealt with the fact that there was no provision as to official sanction with regard to measurements to be taken in either country and that that ought to have been necessary. It is not necessary for me to labor that point before the commission, because it is known that we have had this question of international boards up before the commission more than once. There were the Soo question and others. It was intended that the commission should deal with these things by joint boards wherever may be necessary, although I do not think it is established in any way here that joint boards will be a necessity in either country. It is very possible that the two countries will accept the measurements made by either country under their Government officers, subject to inspection and verification whenever it is necessary, but the absence of any provision of that kind surely is not one which has any bearing on the subject or which carries the matter any further.

It is not necessary, I think, that I need deal at any length with the contention that the commission is to deal only with waters which are being used as distinguished from waters which may be used. It seems to me too clear for argument. The very purpose of this commission was to prevent the possibility of any disputes in the future, disputes which would be brought up more than in any other way by allowing the two countries to go ahead with uncertainty as to their rights and to develop works for taking this water, and that the commission would not deal and would refuse to deal with the situation until the water was being actually used. The language of the treaty is certainly to the contrary. They are to deal with the water which is to be used, and I think I may leave the matter there without elaboration.

That being the situation, I would find it difficult to understand how my learned friend could raise any question of jurisdiction, although I do not understand that he has officially done so. So far as an interpretation of treaties is concerned, it may be true that in certain cases the situation will be such that the two Governments will refuse to be bound by a treaty until it has been interpreted in some other manner; but any such case would be one wholly different to anything which has been put forward by my learned friend here or which appears in any shape, manner, or form in the material. I do not think it is necessary to cite authorities. In a decision of the Supreme Court of the United States in the case of the Society for the Propagation of the Gospel against the town of New Haven (8 Wheat., 464) the court said:

The terms in which this article is expressed are general and unqualified, and we are aware of no rule of interpretation applicable to treaties or to private contract, which would authorize the court to make exception by construction, where the parties to the contract have not thought proper to make them. Where the language of the parties is clear of ambiguity, there is no room for construction.

That is no new statement of the law. We can find it as far back as that of a recognized writer of international law with whom Mr.

Mignault is doubtless far more familiar than I am; I refer to De Vattel's Law of Nations. I wish to quote an extract from De Vattel's Law of Nations, edition of Joseph Chitty, 1834, chapter 17, on the interpretation of treaties, page 246:

The first general maxim of interpretation is, that it is not allowable to interpret what has no need of interpretation. When a deed is worded in clear and precise terms—when its meaning is evident and leads to no absurd conclusion—there can be no reason for refusing to admit the meaning which such deed naturally presents. To go elsewhere in search of conjecture, in order to restrict or extend it, is but an attempt to elude it. If this dangerous method be once admitted there will be no deed which it will not render useless. However luminous each clause may be, however clear and precise the terms in which the deed is couched, all this will be of no avail, if it be allowed to go in quest of extraneous arguments, to prove that it is not to be understood in the sense which it naturally presents.

Now it seems to me that that characterizes the contention of my learned friend in the nature of extraneous argument. I wish also to quote from section 268 of the same edition:

As these rules are founded on right reason, and are consequently approved and prescribed by the law of nature, every man, every sovereign, is obliged to admit and to follow them. Unless certain rules be admitted determining the sense in which the expressions are to be taken, treaties will only be made words; nothing can be agreed upon with security, and it will be almost ridiculous to place any dependence on the effect of conventions.

Now, that being the situation, and the situation being well known, of course, to both Governments, it is obvious that if it was intended to seriously present any question of interpretation of a treaty, claiming that there was ground for an actual interpretation which would dissolve the jurisdiction of this commission regardless of the terms of the treaty, that would not have been and could not have been presented before the court except in a certain manner, that is by a statement to the commission that they had no jurisdiction, and that the United States Government would refuse to be bound by anything that they did. I have proceeded on that assumption. I am proceeding on the assumption that this commission will decide this matter and that both countries will act upon such decision.

Now there are minor questions to be taken up, although they were not dealt with at any length by my learned friends, Mr. Wyvell and Mr. Bien, and those are questions of measurement and apportionment in relation to the prior appropriation clause. My learned friend, Mr. Wyvell, said that this matter was one to be worked out in practice. My argument practically is this, that although it may have to be worked out for the purpose of beneficial use of those countries in a general rather than in a specific way, there is an existing lien on the waters of these rivers to be treated as joint liens to the extent of those prior appropriations, and that the resulting balance, whatever it may be, is to be divided between the two countries. That is what seems to be in accordance with the meaning of prior appropriations, and in accordance with irrigation practice. It would seem that there was considered to be a charge on the waters of each of these rivers for a specific amount, that this charge is to be taken care of by the respective Governments in interest and their citizens, and that what was left to be divided between them was the balance and the balance only.

Mr. POWELL. How divided, equally?

Mr. MACINNES. Divided equally. The prior appropriations are taken care of. As I say, it may be that beneficial use will show that it is unnecessary to deal with these prior appropriations specifically, but that they will be taken care of, and an allowance made for them in what may be described as a territorial division or a division in blocks of months rather than at a number of different places per day.

I do not think it is necessary, perhaps, to enlarge on that in words, because the Canadian engineers have prepared certain suggestions, which I will put in shortly, to the commission indicating a manner in which that can be done to the satisfaction of the Canadian interests. It seems to be better and clearer to do that than to argue this thing at any great length, but a brief statement can be made to the effect that that is our view with regard to the prior appropriation clause, and I do not understand that there is very much difference between myself and my learned friend on that point.

With regard to the lower Milk River Valley, my argument is that the United States Government certainly intended to take care of and did take care of the prior appropriations required to cover the interests in that valley. With regard to what was said by Mr. Sands as to the tributaries, it may be true that this treaty may affect the tributaries, but that is not material, if the tributaries are brought into a common arrangement with the result that he gets as good or a better arrangement and protection than he would have if there were no treaty or arrangement, because without any arrangement the situation would be that if the United States were to contend that it would divert the waters of the St. Mary into the Milk River, then the natural result would be—although it is inconceivable that it would ever reach that point—that Canada would take the waters out again, and there would be no Milk River waters flowing down into the United States. In the same way, so far as the tributaries are concerned, the northern tributaries which contribute no less than 200,000 acre-feet at the boundary line that would be open to Canada if a high-handed stand were taken—I hate even to use this language, because it is inconceivable that such a thing could happen—it could also be arranged that even that water would never reach the United States, and if the two countries should behave like two Kilkenny cats, the gentlemen in the Milk River Valley would be vastly worse off than if their rights were safeguarded and rendered certain. Mr. Burley asked me to state with regard to the figures put in as to the waters of the lower Milk River Valley that instead of being too small, as Mr. Sands seemed to think, there was a lot more water there than we had allowed for. The position was taken by the officials of the United States Geological Survey, who dealt with stream measurements, that those figures are too large. So I do not think that he can anticipate that there is any danger on that score.

I made reference just now to the canal on the Milk River—the so-called A. R. & I. Milk River Canal. Mr. Dennis gave some evidence on that, to which Mr. Wyvell referred. As the documents have been put in, I think I ought to refer the commission to Dr. King's memorandum of the 23d of December, 1908, which explains more fully than the statement of Mr. Dennis the reasons why that was constructed. It was not merely a canal for safe protection in

case anything was done by the United States on the St. Mary River, but it was also a canal that could be utilized and can be still utilized to a good purpose. I assume that the commission has had impressed upon it the fact that the waters, either of the Milk River or of the St. Mary River, diverted into the Milk River passing the A. R. & I. Canal at this point, can be taken out and not necessarily used directly on the land from there, but put into reservoirs and distributed from there on the irrigable land shown on the map in the St. Mary River district. That is an important point for the commission to bear in mind, for this reason, that there is another linking up of these two rivers, so that at this place the waters of either river can be used. That is to say, any waters which Canada gets at that point can be waters either of the Milk River flowing past it or they can be waters of the St. Mary River diverted by the United States into the Milk River and flowing past it. So there is a possibility of making there an optional arrangement for beneficial use. The waters of either river can be used at that point.

Then my learned friend Mr. Wyvell put in a memorandum of Mr. Newell, dated the 29th of December, 1908. While I think Mr. Newell knows me too well to think that I would challenge any statement that he makes, there is contained in that memorandum a suggestion not possibly as to an actual storage agreement between the two countries, but that an arrangement might be made before letting down the waters stored by the United States in the St. Mary River. That was a suggestion that was made by Mr. Newell and was contained in this memorandum which Mr. Wyvell has seen fit to put in. I have no doubt that the explanation of that is that it is not what would be called a storage agreement, but it shows that there was a possibility of some arrangement of that kind being made, and, of course, I presume that some such arrangement may yet be made between the two countries with respect to the St. Mary River and possibly also in Canada in connection with the eastern tributaries, the Frenchman River and Battle and Lodge Creeks, etc. But while there is nothing in Article VI under which this commission can direct anything of that kind or impose any such conditions on either country, it may be that when they get the engineers before them again, if it becomes necessary, they may be able to improve on the situation by getting the two countries together and making some arrangement between them, because we have not only the fact that joint storage is obviously one of the clearest solutions of this matter in the St. Mary, but we have the same situation on the Canadian side with regard to the eastern tributaries of the Milk. So there is a possibility there of the commission being able to get both countries to do a little more if it is found that it is necessary for beneficial use.

I have not yet dealt with the constitutional point raised by Mr. Sands. I certainly think that the point is a very interesting one academically, but the facts which do seem to be clearly established are these: That there is a decision—at least one decision—of the United States Supreme Court which is absolutely contrary to the contention which he has raised. Mr. Sands read some very interesting extracts from a textbook writer, but I certainly have not heard, although I do not profess to be qualified as a counsel in

United States law, a decision to the contrary of the one that has been referred to. There is a fact which is certainly worth bearing in mind. The textbook which Mr. Sands read to you contains the statement that Mr. Root's views are entirely to the contrary of the views which are being advocated by the textbook writer. That is perhaps of interest because my learned friend Mr. Wyvell did drop the remark that it might be in the minds of those who authorized the treaty that the law was as contended by this textbook writer. It so happens that the Secretary of State at the time he dealt with this matter was Mr. Root, and we know very clearly what his views, at any rate, are. A point of that kind is of colossal magnitude, because it would not only upset this treaty with regard to this matter but might possibly upset it at other points, and no such contention has been raised to my knowledge by or on behalf of the United States at any time, nor yet do I understand that it is raised before you officially here by my learned friend. While it is a very interesting point to discuss, I do not think that I need worry you in any way with any more authorities than I have put before you.

Mr. GLENN. This Bear Paw River is wholly within the State of Montana?

Mr. MACINNES. Yes, sir.

Mr. GLENN. The State of Montana has granted certain privileges to the citizens along that river for irrigation and power purposes?

Mr. MACINNES. Yes, sir.

Mr. GLENN. Do you think the United States Government, in making a treaty with Great Britain for Canada, would have the right to make a treaty that would interfere with the flow of that river, which is entirely within the boundaries of the State of Montana and which it has assumed jurisdiction over and granted such privileges?

Mr. MACINNES. I should be bound to assume so for this reason, that it is expressly so stated as I read it in the Constitution of the United States.

Mr. GLENN. With the decisions construing that Constitution of the United States?

Mr. MACINNES. Quite so; and the only decision which I know of which is of real value and which is before us today is the one to which I have referred.

Mr. GLENN. There are a great many others besides that, and you will find that distinguished by another case, which states that the point raised in there by Judge Swayne was not applicable, because the State of Virginia did not have any such law as that. But here in this case that we have before us the State of Montana has taken jurisdiction over this river and has granted privileges. Now, can the United States Government come in and make a treaty and interfere with the rights of the State with regard to a matter entirely within its own boundary?

Mr. MACINNES. If that is the law, it is the law, and it would seem to me that there is probably not the danger which is present in our minds. I would think it would be hard to assume that the Federal Government in dealing with a foreign Government would overlook the interests of any portion of its citizens. When I say the Federal Government, I mean the President and the Senate in whom the treaty-making power resides.

Mr. GLENN. I am referring to this point not with the purpose of ousting the Jurisdiction of this court, but with this purpose, that if the contention were true as made by Mr. Sands that this is a matter entirely within the jurisdiction of the State of Montana and the United States could not do anything with regard to it, would that not be a tremendous circumstance to take into consideration that they did not contemplate at the time of making this treaty of doing that which they knew they had no right to do under the laws of the United States?

Mr. MACINNES With the result that you would then exclude a part of the waters?

Mr. GLENN. Yes; on the ground that it was never contemplated that those waters should be in there.

Mr. MACINNES. Then would not that have the effect of depriving Canada, or Great Britain acting on behalf of Canada, of a part of the consideration which she was to receive under the treaty?

Mr. GLENN. No; not if we found as a matter of fact that it was never contemplated that those waters should be in there.

Mr. MACINNES. Contemplated by whom?

Mr. GLENN. By both Governments, Canada and the United States, at the time they made the treaty. In other words, when they made this treaty they only intended to do that which they legally had a right to do, and therefore all streams south of the line which never went into Canada and all streams north which never went into the United States were never intended by the United States or Great Britain to go into this treaty.

Mr. MACINNES. The answer to that is clear. We happen to know who was the Secretary of State dealing with the matter on behalf of the United States. We also have before us a record, which I presume is correct, of what the views of that Secretary of State were. Have I made myself clear?

Mr. GLENN. Do you mean Root's letter?

Mr. MACINNESS. No. It is stated in this book quoted by my learned friend that Mr. Root's views on this point are in accordance with the decision of the Supreme Court of the United States, in effect, namely, with the President, with the advice and consent of the Senate, can make a treaty with a foreign power dealing with a State property and State rights.

Mr. GLENN. That would throw some light upon the subject of what was in his mind at the time.

Mr. MACINNES. If that be a correct statement of what Mr. Root's views are, that would be an answer to your question.

Mr. GLENN. Still his views can not contemplate the laws of the country.

Mr. MACINNES. You are putting it up to me that if Mr. Root had thought that those waters would be excluded, it would be fair to exclude them.

Mr. GLENN. You say that at that time he could do it?

Mr. MACINNESS. That would be the case.

Mr. GLENN. I am frank to say that we southern folk have pretty strong ideas of States rights, and we haven't gotten them entirely out of us yet, although they gave us a pretty severe jolt. If the Federal Government can come in and take a river that is absolutely, say,

in the State of Montana, entirely within its jurisdiction, and which they had used and given to their citizens to use, and make a deal with a foreign country, they can go still further and take anything else we have in the State.

Mr. MACINNES. That would be *reductio ad absurdum*.

Mr. GLENN. Then would the treaty-making power on both sides finally come to a conclusion that would be absolutely absurd. Therefore, knowing that, would not we have a right to let them throw any light upon what was in the minds of the two parties when they made this contract which is called a treaty between the two nations?

Mr. MACINNES. This is 1915, and since the framing of the Constitution of the Government of the United States there have been a great many treaties which have been passed. I am not aware of the United States Government having put forward that view to a foreign country, that we have made a treaty with you which includes the property of certain of our States and that under your constitution you are able to deal with the property of your citizens, but we under our Constitution are not, and you are under a mistaken view therefore if you relied on what we propose to give you as a consideration.

Mr. GLENN. I think you will find by looking at the treaties of the United States that you can not show an instance of where they have attempted to take property that belonged absolutely to a State and made it a subject of treaty with a foreign nation.

Mr. MACINNES. Let us take this situation: You seem to be assuming, Governor—and this is only discussion, of course—that the Government of the United States has willfully here taken away the property of the citizens of Montana.

Mr. GLENN. No.

Mr. MACINNES. Well, that seems to be the way in which your position is working.

Mr. MACINNES. You seem to be assuming that the Government of the United States is unlawfully taking away the property of the citizens of Montana.

Mr. GLENN. No, sir; my idea is that the argument is used simply for the purpose of showing that the United States did not intend to take away the property of Montana because it knew it had not the right, and therefore it did not attempt to put in the treaty things it had no right to put in.

Mr. MACINNES. On what do you base that?

Mr. GLENN. On this fact, here is a treaty which puts in certain tributaries. Taking all of the evidence that has been put in, it looks as if the object was to take in simply those tributaries running across the line.

Mr. MACINNES. With all respect, I do not think so; it is back and forth.

Mr. GLENN. In addition to that comes the further fact that I do not believe any two great contracting parties would attempt by any treaty to take away from a State that which they would have no right to take away. The only way in which this question of jurisdiction could come in for the purpose of ousting this commission at all would be if we attempted to construe it in that way, and possibly, under the construction of that contract, it would be competent for us to do so. If we do so, what will be the result? Montana will

step in and say: "You have no right to do it; we will not allow this. Then everything that would be done would fall to the ground.

Mr. MACINNES. Why?

Mr. GLENN. Because the Federal Government can not take the property of a State and give it to anyone unless the State agrees to it.

Mr. MACINNES. If it be the law that the United States Government is limited in making its treaties to that effect, then certain results would flow from it, but the first step surely is to have it established that such is the law of the United States.

Mr. GLENN. I ask you for your authority. You seem to think they have the right to take away the water of a river in a State, and if they have the right to take away the water of a State they have the right to take away the land of a State and to trade away the State itself, and then the Republic would be dissolved.

Mr. MACINNES. That is your personal view, Gov. Glenn, and for it I have the highest respect, but if the decisions of the Supreme Court of the United States are to the contrary, surely they would govern.

Mr. GLENN. Do you mean to tell me that the United States Government and the British Government could make a treaty to absolutely do away with the State rights of the State of New York?

Mr. MACINNES. Your law is there, sir. I think it is a somewhat unreasonable proposition to cross-examine me on United States law; I would much rather have an opportunity of cross-examining you upon it.

Mr. GLENN. But we are trying to get light on the subject.

Mr. POWELL. Unfortunately for the Province in which I was born, that was exactly what was done. By the treaty of Ashburton there was taken away from the State of Maine the Aristook territory, which was recognized as a part of the State of Maine, and they gave us a quid pro quo.

Mr. MACINNES. If Gov. Glenn will allow me, in response to your question, Governor, as to whether that is or is not the law of the United States, I put before you the decision of the Supreme Court of the United States. Have you got any authority to the contrary that would agree with your own personal view?

Mr. GLENN. Yes, sir; you will find a good many authorities distinguishing that case from other cases.

Mr. MACINNES. If there is any conceivable real doubt on this point, however undesirable you may think it personally, Gov. Glenn, or however undesirable anyone may think the law might be, the commission should have information from briefs or otherwise before it on the point.

Mr. GLENN. I say that there are other cases distinguishing that case from this, and I wished to hear your view as to how far you go in the argument that a treaty between two countries can abrogate the rights of a State of the Union in regard to its own territory, if the State wishes to take exception. I do not say that Montana would make that point, but in case they did, what would come of it?

Mr. MACINNES. My answer to that is, that under the law applicable to the high contracting parties to this treaty, there is no such limitation, and unless, therefore, it is absolutely clear and an

accepted fact, that there is such a limitation on the part of the United States, that then if the treaty were entered into between the two countries, and it was subsequently suggested by anybody on behalf of the United States that they were not under obligation to give part of the consideration to Great Britain then, of course, that would result in putting an end to the whole contract. If, however, the law of the United States is absolutely clear on the point, and is accepted and acknowledged by Great Britain in this instance, then a different situation arises.

Mr. GLENN. I am very frank to tell you that I have not made up my mind about it, but I want to get your views. When you read that case yesterday, it took my breath away. We southern people are very much inclined to believe in State rights, and while we have been reconstructed we have not given up our views on that line. I will be very frank with you; I do not think any United States Government would have the right to take away from a State that which belongs to a State.

Mr. MACINNES. If that is so, it seems to me it leads to a far more startling consequence on the other side.

Mr. GLENN. I do not think so. I would not consider that argument only for the purpose of throwing light on what was in the minds of the contracting parties. I take it for granted that the Government of Great Britain and the Government of the United States did not intend to do anything which was illegal.

Mr. MACINNES. If there could be no limitation on the doctrine which you lay down, Gov. Glenn, it would put an end to the whole of this treaty, as to boundary waters, because they are absolutely the property of the United States.

Mr. GLENN. It has some analogy to interstate and intrastate in our country. Rivers running along the boundary are subject to a treaty.

Mr. TAWNEY. Would it not follow from your reasoning, Gov. Glenn, that in agreeing to allow Canada the one-half of the water of the Milk River and the St. Mary River, it is taking away from the State of Montana that much water which otherwise the State of Montana could divert into its own territory and use, if it saw fit?

Mr. GLENN. I think when a river is once international it always is international; you can not make it international part of the time and State property the other part of the time. But when it is State property altogether it never can become international. I think you will find that the decision of the Supreme Court will bear that theory out.

Mr. MACINNES. I am not pretending in any way to be qualified to express an opinion on the law of your country, but I may, of course, cite authority, and I am able to do so, thanks to the kindness of my friend, Mr. Isaac Campbell, K. C., who is present and who is well known to the members of the commission. I cite the case of *Jeffrey v. Riggs*.

(Mr. MacInnes cited from Mr. Justice Field's decision in this case.)

Mr. BIEN. May I read three or four lines from Tucker's book, page 143? It is the title of chapter 6:

The cases of *Chirac v. Chirac*, *Hauenstein v. Lynham*, *Geofroy v. Riggs* hold that the treaty power may remove the badge of alienage from foreigners, but do not hold that this power may annul the law of dissent of the States.

They are drawing a line there between Federal and State questions. Mr. MACINNES. May I cite a most illuminating address by Mr. Frank B. Kellogg, of this city, who was president of the American Bar Association in 1913? I remember hearing him make the address at Montreal, and it is printed here and contains a discussion of all the cases, and Mr. Kellogg's view is—his view is the view of an eminent member of the bar, but I do not suppose it goes any further than the views of an eminent text-writer—his view is that the treaty-making power is absolute, although no wise Federal Government would do anything which would deprive a State of its property without proper consideration. That is to be found in the Reports of the American Bar Association, volume 38, 1913.

Mr. GLENN. I wanted to get your view, Mr. MacInnes, and you seem to be under the impression that they can do this with regard to a river or the property of a State. I have called your attention to it, and I would be very glad if, at any time after you go home, you would see what the cases are and where you can distinguish them, and send a memorandum.

Mr. MACINNES. I shall do that.

Mr. POWELL. A very interesting point is raised by Mr. Sands. Whatever the authorities may say, under the Daniel Webster and Ashburton treaty they handed over to the State of Maine a large portion of territory previously claimed by New Brunswick, and they took away from the State of Maine a portion of territory claimed by the State of Maine.

Mr. MACINNES. That is an exact instance of the case in point. You say that was done?

Mr. POWELL. Yes; that was done under the Ashburton-Webster treaty. The point raised by Mr. Sands is this: He says that while the United States Government might take the power to alienate property or affect property where that was a direct subject of international controversy to be settled by treaty, yet they would not be justified in going afield and taking the resources of the State as a quid pro quo or a consideration in making a settlement. That is virtually his point.

Mr. MACINNES. I am very glad you called attention to that, because the answer is clear. That might be so if property in the lower Milk River Valley was being given away in consideration of an arrangement made in some other State under this international agreement, but here we find that what is suggested as being given away is certain waters of the lower Milk River Valley, and these form part and parcel of this whole arrangement.

Mr. POWELL. That is true, but take these waters that come from the Little Rockies and never reach Canadian territory at all. They strike the Milk River and then run down the Milk River channel to join the Missouri; they never enter into Canada in any way. Of these, the United States, according to your contention, have they not gone to work and given to Canada a certain interest in these rivers that are not subject to international controversy in any way in order to adjust a settlement of the Milk and Mary Rivers, where there are what you call international difficulties.

Mr. MACINNES. As was stated by the engineer, and it will be made more clear if necessary, that what could be done and is done in irrigation is an exchange of waters, so that these lands which may be

watered geographically by the tributaries could be watered, and watered better, by water obtained elsewhere.

Mr. POWELL. Suppose the State of Montana should prefer to look after her own interests that are not the subject of international controversy, would you have anything to do with that?

Mr. MACINNES. There never has been the slightest objection from the State of Montana since the date of the treaty up to yesterday. You had the attorney general of Montana before you, and no such point was raised by him.

Mr. POWELL. It is raised on behalf of the appropriators.

Mr. MACINNES. I am not saying that Mr. Sands is insisting academically.

Mr. POWELL. If there is anything in his point, it is more than academic.

Mr. MACINNES. The reason I feel confident that there is nothing in his point is that we have not had it presented to the commission by the United States Government or by the State of Montana, nor has any authority been put before the commission, except a textbook writer, on matters in reference to government within certain States. There is nothing before the commission to indicate that what Mr. Sands contends may be the law.

Mr. POWELL. This is a very intricate matter, and I do not intend now to give any expression of opinion upon it.

Mr. GLENN. Some of the cases cited by Mr. Sands this morning were not textbooks, but Supreme Court decisions.

Mr. MACINNES. And no doubt the United States Government also, or some representative of it, has a knowledge of the law of the United States.

Mr. GLENN. Please do not misunderstand me. Where the Federal Government has the right, no State statute and nothing else can interfere by any possibility with its right to make a treaty, but where the Federal Government is going beyond its power to deal with matters in a State, then the State can be heard. That is the line of distinction in our courts from one end of the country to the other. If you take Article VI on the limitation of the treaty-making power, you will see that every one of these things is distinguished.

Mr. MACINNES. I suppose you will agree with me that it would have to be very clear law to be binding on Great Britain under such conditions.

Mr. GLENN. I recognize that. I have only asked you would it not be a circumstance as throwing light upon what was in the mind of Great Britain at the time the contract was made. Surely the eminent jurists of Great Britain and of the United States who were making that treaty would not want to do anything that was illegal; surely they would not want to do anything illegal as interfering with the right of a State. A treaty would be perfectly legal if it did not interfere with the law of the State.

Mr. MACINNES. We are agreed that it is either the law or not the law. If it is merely a matter which is disputed among textbook writers, that dispute among textbook writers would not be ground for depriving Great Britain of its right under the treaty.

Mr. MIGNAULT. My view on it is this: This question we are now discussing, while interesting, is not involved here. We are called upon to give effect to the language of Article VI of the treaty. If

this language goes further than the treaty power of the United States allowed the United States to go, we can not, and have no authority to declare that this treaty, in so far as it transcends the power of the United States, is *ultra vires*. There would be a practical competent procedure on behalf of the State of Montana or any authority to attack this treaty. No such proceeding has been taken, and this commission would be absolutely without jurisdiction to disregard the plain meaning of the language of Article VI because, in the opinion of this commission, the United States might not have the power to make the bargain. That is my view. I do not purpose deciding whether or not the United States had the power to make this bargain, but what I do purpose is to give effect to the plain meaning in English of the language of Article VI of the treaty.

Mr. GLENN. I would view it that way and I would only consider the argument as giving some indication of what was in the minds of the framers of the treaty.

Mr. MIGNAULT. It would be great presumption on our part to say that the United States has not the power to make a treaty.

Mr. GLENN. We have two contentions before us; one, that all the water must be taken in, and the other, that all the water be taken in except certain waters which are in Montana, and as throwing light on that the argument is valuable.

Mr. MIGNAULT. All we have to do is to construe the language of the treaty, and we are not concerned with what the power of the United States is.

Mr. MACINNES. The view to which you have given expression is entirely in accord with the case in 8 Wheaton, which I cited a moment ago.

Mr. POWELL. There is a similar decision in the Supreme Court Reports, 141, where they said that if a treaty was clear they had no right to interfere with it.

Mr. MACINNES. I feel that this is the only point with which I need deal in connection with the contention raised by my learned friends in opposition to giving effect to the clear language of the treaty. If there is any matter which the commission thinks I have not dealt with I shall be glad to address myself to it, and to deal with it now, and if not, I shall proceed.

Mr. POWELL. There is one thing which is nebulous in my mind and that is as to the meaning of "beneficial use." Is the ownership of the water in any way qualified by beneficial use, except those two purposes that are spoken of, irrigation and power?

Mr. MACINNES. I understand by "beneficial use" that the commission would seek to make such an arrangement as to distribution of the component parts in such way as to be beneficial.

Mr. POWELL. Your idea is that it is a marshalling of the waters of the two rivers.

Mr. MACINNES. It is a marshalling of the waters and applicability to the different districts, which may not arise if there is no dispute.

Mr. POWELL. You think absolutely that the water that is there or will be there, taking the two rivers together, is one-half of the totality in Canada and one-half in the United States.

Mr. MACINNES. A prior appropriation in one country plus one-half and on the other side a prior appropriation plus one-half.

Mr. POWELL. You say that all the water there is disposed of by the treaty in some way or other?

Mr. MACINNES. Yes.

Mr. POWELL. Whether one side would let it go to waste or make use of it, would you consider we should inquire into it?

Mr. MACINNES. You are to give a direction as to the right of each country to make use of it.

Mr. POWELL. For the purpose of marshaling the waters.

Mr. MACINNES. And for the purpose of giving direction to it.

Mr. POWELL. That is your view.

Mr. MACINNES. Exactly; and the only limitations on it that may be, as the wording of the treaty is, irrigation and power. It appears from the evidence here that there is at present a certain amount in both countries which is not applicable to irrigation. That is to say, on the Canadian side an amount between Kimball and the mouth of the United States side between Hinsdale or Vandalia, which is the last point of divergence by the United States down to the mouth. It so happens that the amount of water in each case is, according to the records, the same, or approximately the same. And again, that that water, probably in one year or the other, could be used for power, so that from the principal standpoint of considering what is to be used, I assume you can deal with the total. If you give its share on the United States side to Hinsdale and on the Canadian side to Kimball, you would be dealing with the whole subject matter probably.

The general recommendations on behalf of Canada for the assistance of the commission in giving its direction for the apportionment and the measurement have, so far as additional gauging stations are concerned, already been put before the commission in the form of a draft or map.

These stations, in addition to existing stations, would be used for the purpose of obtaining correct data for the measurement of the total amount of the waters involved, so that you may arrive at the total and for the measurement of the component parts of the share to which each country is entitled, and possibly also, if it becomes material, for the purpose of obtaining such data as may be necessary in connection with the measurement and delivery of the prior appropriation to which each country is entitled on the different rivers, although, as I pointed out before, it is quite possible that the prior appropriation will be worked out under a general scheme of distribution rather than under a specific one. Then we suggest that the commission should give its direction for the purpose of apportionment between the two countries, in accordance with beneficial use, giving effect to such prior appropriations, as I have mentioned, either specifically or as part of the shares. At some subsequent date the commission might take up, not as part of its absolute duty, the possibilities of arrangement for joint storage between the two countries, although that is not one of the matters as to which you need to give directions.

It was said during the proceedings that the commission have not been applied to to deal with this matter by either country, and that, therefore, perhaps there was no necessity for the commission to give direction as to what the share of each country is. Our view is this,

and it seems to be incontrovertible, that the commission has now taken this matter up for the purpose of giving such direction, and that while the interests of both countries may not have found it necessary to come before the commission up to date, it would be detrimental in the extreme if it should be conceded by the commission that while the provision was there, and they had taken it up and were dealing with it, they were not going to decide it but leave it vague and indefinite.

The situation in that respect is perhaps a little different between the two countries. In the United States there is this large project of the Reclamation Service. Mr. Newell has stated to you what is being done and what is proposed to be done, and it was shown that the maximum contemplated storage and requirements of the waters of the St. Mary River would be about 200,000 acre-feet and with that and the waters obtainable in the lower Milk River Valley through their natural flow, coupled with the existing storage at the Nelson Dam and possibly also other dams which are dealt with in the Reclamation Service report, the Bowdoin, the Chain of Lakes, and so forth, and that with that they can irrigate approximately 220,000 acres, and that that is all the land they can find that can be controlled by that scheme, therefore, they have a definite situation on their side which they do not want to extend. Mr. Newell told us that apart from all that, there are possibilities of similar schemes, but not Governmental. On our side, the matter is different. There are possibilities stated to you by the engineers for large irrigation works and for large products, and that while the water is, so to speak, controlled by the department of irrigation, of which at the present time Mr. Drake is head and Mr. Peters commissioner, no extension of that work is being done by Dominion Government money. It has been shown to you that the people who are interested in these lands are the citizens of Alberta, who have acquired these lands and who would need to get private capital to carry on these works, with the possible assistance, by recent legislation, of the Alberta government. You have on the Canadian side a situation in which it is essential for the parties to know what their rights are if they are to get to work to consider the possibility of creating a new project on a large scale. I shall read to the commission a short memorandum of the possible division which would be satisfactory to Canada. This suggestion, I may say, has the approval of Mr. Drake, Mr. Peters, and Mr. Burley. It is put forward for the assistance of the commission, as we have a desire to help them to every possible extent, and it is not assumed to be anything in the nature of a dictation to the commission, but it is a tentative scheme and proposed and would be satisfactory, and it contains within itself various possibilities of optional arrangement if it were decided to change here or there after hearing anything which the United States may have to say on the subject.

Mr. GLENN. I will be glad to have all the direction I can get on the subject.

Mr. MACINNES. This memorandum has a schedule attached to it and also a map has been prepared, and I would like to put the map before you as I read the memorandum.

(Map filed as Exhibit Q.)

(The following is the memorandum:)

INTERNATIONAL WATERWAYS TREATY, ARTICLE VI.

DEPARTMENT OF THE INTERIOR, CANADA,
IRRIGATION BRANCH.

It is suggested by Canada that the division of the waters of St. Mary and Milk Rivers and their tributaries may be made by the International Joint Commission, in accordance with the provisions of the treaty, in several ways. A division which appears to fulfil these requirements is appended hereto for the consideration of the commission.

While such division would be acceptable to Canada it is not put forward as the only method of division that would be acceptable.

This method of division recognizes the greater interest of the United States in the waters of Milk River, or in waters that can be diverted into Milk River, and the similarly greater interest of Canada in the waters of St. Mary River. It also recognizes the interests of both countries in the waters of the Saskatchewan tributaries of Milk River and, it is believed, adequately fulfils all requirements on these tributaries.

Suggested division of the waters in accordance with the treaty.

| | Canada. | United States. |
|--|------------------------------|----------------------------|
| St. Mary River up to a maximum flow of 2,000 second-feet, May to October, inclusive..... | <i>Acre-feet.</i> 500,290 | <i>Acre-feet.</i> |
| St. Mary River below A. R. & I. intake..... | 172,000 | ..... |
| St. Mary River from November to April, inclusive..... | ..... | 131,662 |
| St. Mary River, peaks of over 2,000 second-feet flood flow in summer..... | ..... | 103,500 |
| Milk River at eastern crossing..... | ..... | 100,000 |
| Less delivered at A. R. & I. intake on Milk River..... | ..... | 335,162 |
| Equals..... | ..... | 76,400 |
| Milk River at A. R. & I. Co.'s intake, during floods..... | 320,000 | 258,762 |
| Milk River at A. R. & I. Co.'s intake, St. Mary or Milk River waters..... | 76,400 | ..... |
| Northern tributaries of Milk River, stored or diverted by Canada..... | 136,000 | ..... |
| Northern tributaries of Milk River, passed by Canada..... | ..... | 54,000 |
| Milk River and tributaries, below eastern crossing up to Hinsdale or Vandalia.. | ..... | 350,000 |
| Milk River and tributaries, below Vandalia..... | ..... | 172,000 |
| | 804,690 | 734,762 |

¹ These amounts are not at present considered available for irrigation but possibly for power.

² Mr. Newell has stated that about 200,000 acre-feet will be required by the United States.

³ Estimated capacity of A. R. & I. Milk River Canal.

NOTE.—The difference between the total quantities is a low estimate of the value of the Canadian prior appropriation on St. Mary River as compared with the United States prior appropriation on the Milk River.

Mr. MACINNES. I wish to say in explanation of the diagram (Exhibit Q) that a simple set of diagrams has been prepared to illustrate graphically the apportionment suggested by Canada, those figures above the sketch map showing the share of Canada in red, and the lower figures that of the United States in green. The horizontal length indicates the irrigable area in each country and the vertical height represents to scale the duty of water possible under these conditions, or the depth of water to which the irrigable areas can be covered.

Thus, without making any allowance for absorption and other losses—

Canada's share would be:

| | Feet. |
|--|-------|
| From the St. Mary and Milk Rivers, 668,690 acre-feet of water which would cover 640,375 irrigable acres to a depth of..... | 1.04 |
| From the Milk River northern tributaries, 136,000 acre-feet of water which would cover 68,386 irrigable acres to a depth of..... | 2.00 |

Similarly the United States share would be:

From the St. Mary and Milk Rivers and tributaries, 734,762 acre-feet of water which would cover 250,000 irrigable acres to a depth of----- 2.94 Feet.

From these average figures it will be seen that the United States would receive nearly three times the quantity of water per acre of irrigable land as compared with Canada.

I also put in as a further exhibit (marked "Exhibit R") a diagram showing what the result to Canada and to the United States would be if the contention of the United States were sustained, that you should cut up the rivers at the boundary and exclude the tributaries in either country.

This sheet shows the result of cutting the rivers short at the boundary and excluding tributaries wholly in either country, as contended for by the United States.

The upper diagrams, bordered in red, indicate the Canadian shares and should be compared with the corresponding lower diagrams for the United States, bordered in green, thus:

| | Canada. | United States. |
|---|---------|----------------|
| Irrigable area.....acres.. | 709,000 | 250,000 |
| Water supply for average year.....acre-feet.. | 595,000 | 944,100 |
| Water supply for 1912.....feet.. | 573,300 | 1,511,100 |
| Water supply for 1910.....do.. | 425,700 | 518,600 |
| Equivalent depths of water distributed over land: | | |
| Average, year.....do.. | 0.84 | 3.73 |
| 1912.....do.. | .81 | 6.04 |
| 1910.....do.. | .60 | 2.07 |

Mr. POWELL. That is taking the idea of what is so-called international and confining it to that.

Mr. MACINNES. Yes; by cutting the rivers short at the boundary, that is one thing, and excluding the tributaries which are solely in either country.

Mr. TAWNEY. The first map or diagram which you submitted shows the result of the division of the waters in accordance with the recommendation of the Canadian Government.

Mr. MACINNES. Yes.

Mr. TAWNEY. And the other is a map or diagram showing the result of the division of the waters under the contention of the representatives of the Government of the United States.

Mr. MACINNES. That is correct.

Mr. GLENN. Mr. Sands made the statement this morning that the Milk River and the Bear Paw River combined would exceed all the water in the St. Marys River.

Mr. MACINNES. I have been informed by Mr. Burley that that is not correct; that, as a matter of fact, the figures which the Canadian engineers present as being the lower Milk River Valley waters are larger, according to the United States Reclamation Service.

Mr. BIEN. I think that could be made clear by a brief statement. Mr. Sands stated that these tributaries in the Bear Paw country were not measured, and that very little of that water ever came to Milk River. Consequently it does not show in our records as being measured, because the water has never been in the Milk River to be measured. That is where he took issue with me this morning. I was not

aware that so much water had been used on these tributaries. We have in the record the statement of Mr. Newell, which is the result of an examination of each of these tributaries, examining the ditches now constructed and in use and the lands which are under irrigation. I have here a summary of that, which shows that the total valid appropriation from the streams in that Bear Paw country, very little water of which goes into the Milk River, is 797 second-feet. We can not put that in as measurement, but I simply quote it in connection with Mr. Sands's statement that a very large proportion of the water falling within the Milk River drainage basin in the United States, and south of the main river, has not been measured and has not been accounted for in any of the figures that have been presented.

Mr. POWELL. The total you make is about one million and a half.

Mr. BIEN. I am estimating what they represent. This is based on what the engineers saw as to the size of the ditches and the reservoirs, of which there are many, and the land which is being cultivated, so that it is a pure deduction on their part; and just the amount of error there may be in that, I submit, we can not tell.

Mr. POWELL. Mr. MacInnes, there is a point raised by Mr. Bien—do the Canadian engineers propose to allot, in addition to the unmeasured quantities on the south side of the Milk River; altogether you give the United States somewhere about 740,000 acre-feet. It appears from the statement here that the total amount of water in the Milk River, after passing the boundary, is somewhere about one million and a half feet, if these estimates are correct.

Mr. BURLEY. Regarding the inflow of the Milk River, after it crosses the eastern crossing, my estimate is 340,000 acre-feet. The United States Geological Survey disagree with me on the ground that I am too high in my estimate. That would reduce it to a total flow of 650,000 feet as compared with 731,000 feet, which is a reduction of 81,000 feet in flow into the Milk River after it passes the eastern crossing.

Mr. POWELL. How do you get that measurement unless there have been measurements?

Mr. BURLEY. That is an estimate based on the run-off per square mile for the stations for which we have records.

Mr. BIEN. The run-off per square mile must be very approximate.

Mr. BURLEY. I admit that.

Mr. SANDS. The figures of the United States were lower in both streams.

Mr. BURLEY. The figures on the St. Mary were lower on the United States side naturally, through their wish to throw out part of their published records, and I had assumed that their published records were correct. They throw those out completely, so that reduced their total some 15,000 acre-feet.

Mr. SANDS. In arriving at the flow of the Milk River you took the gauge at Hinsdale, added to it something for the water that would come in below Hinsdale, and the waters that were taken out along the Milk River.

Mr. BURLEY. And its tributaries.

Mr. SANDS. And the tributaries.

Mr. BURLEY. Battle Creek and such tributaries as I could obtain records for.

Mr. MACINNES. I desire a few moments more for the purpose of dealing with the recommendation made to the commission by Mr. Newell.

The commissioners asked for the views of the representatives of the two countries, and in that connection I would state that in my opinion the action of the International Joint Commission should be:

First. Under the last clause of Article VI to call upon the respective Governments to designate their properly constituted officials.

Second. That when those properly constituted officials have been designated, the International Joint Commission recognize them as their executive officers.

My remark on that is, that it might be better, so far as our Government is concerned, to leave it to the respective Governments to say they would be represented by their existing bureau or department or by a particular officer or officers.

Third. That these men be called upon for a report on the measurements and quantities already measured and agreed upon, and for such facts concerning the use of the water as are matters of public knowledge and record.

That, of course, has been done at this hearing, so far as it was possible to do so. But, of course, it would be quite satisfactory and proper that this whole material should be gone over and checked and made certain of. We are in accord with that.

Fourth. That when this has been determined upon, they also make recommendations for more measurement stations and more data which must be accumulated in the near future in order to enable executive action.

We have put in our views before you as to the measurement stations, and if there are any suggestions to be made by the United States we shall be glad to hear them.

Fifth. That at the same time they make an estimate or budget of the amount of money required to carry on this work of river measurement, which obviously must be somewhat expensive—

I presume that each Government would do that for itself; that is a matter of detail, there is no real difference between us on that.

and for making any further surveys which may be required to determine the boundaries of irrigated lands and proposed canals.

We would say there that we think it would be better for the commission to make any suggestion. There is a good deal of evidence before you on the subject. We have endeavored to be as thorough as we can, but if the commission, after going over this material, finds that it wants anything more, well and good; they can make the suggestion or direction.

Sixth. That they be authorized by the International Joint Commission as their representatives to continue measurements at the points which are agreed upon, and that they then receive, consider, and act upon the instructions of the International Joint Commission with regard to the apportionment of the water.

Our view there is that this is the plan and the object of this present meeting, that those matters have been gone into, and that the commission will make direction on the subject.

I have said on this all that I think it is necessary to say, and I thank the commission for hearing me so patiently.

Mr. WYVELL. I believe that the sitting of the commission at this hearing has accomplished a good purpose. Now that all the evidence is in, and as it is the desire to conclude the meeting this evening, I have no desire to add to the length of the deliberations by saying more than this: That we have in the United States a certain

practical way of looking at things and that we cannot get out of our ideas. It is suggested that all of our estimates, in matters of irrigation and extension of irrigation, are not based on the average flow or on high flows—in times of high flow we need no irrigation at all, but on a comparatively low flow. We felt that this thought should be borne in mind by you, and we even took the risk of repeating it to you with the idea that it might be of some help to you, if you do see fit to take up this problem. We are also practical enough on our side to think that the work of the commission had, of course, a practical object in view, a beneficial work, and a continuing work, and we believe that the outline of that work was clearly laid down that these measurements should be made from time to time with the idea of increasing both the efficiency of the works now in force and with a view of increasing the works on both sides. With regard to the first part of Mr. MacInnes's talk about the atmosphere here, may I say that I have not been offended nor have I placed any construction on any language which he may have used or upon any matter which he has desired to present to you. I hope that as I have not placed any construction upon Mr. MacInnes's purpose, he will reserve to me my right to place my own construction on such matters as I may have presented to you.

Mr. MacInnes has quoted from the case in 133 United States, page 258. It is a case which I had noted and read, and in that case there was a treaty between the United States and France by which it was provided that Frenchmen should be able to hold and inherit property the same as citizen of the United States, as to States which already had laws permitting aliens to inherit, and with regard to States which had not laws permitting aliens to inherit, the President agreed to recommend the passage of these laws. That case will, I am sure, be interesting to Commissioner Glenn, because it plainly recognized the right of the State to pass the law, and the only obligation placed upon the President was to recommend to other States who did not have such a law.

Mr. POWELL. The treaty did not confer a status on the aliens at all?

Mr. WYVELL. Although that treaty provided that an alien Frenchman might have the rights to inherit in a State of the Union, the United States Supreme Court said that that should also include the District of Columbia, and it read the District of Columbia into the treaty. Mr. MacInnes also referred to the rules laid down by the learned Vatell, which are very interesting, and are the foundation of all rules, but in other respects they are wholly indefinite.

In closing, may I be permitted to cite for your guidance the rule laid down by the United States Supreme Court in *re Ross* (140 U. S., p. 475), which is one of the leading cases upon construction, and it is of great importance because it involves the construction of a treaty with the Empire island of Japan. In this case it is stated:

It is a canon of interpretation to so construe a law or a treaty as to give effect to the object designed, and for that purpose all of its provisions must be examined in the light of attendant and surrounding circumstances. To some terms and expressions a literal meaning will be given, and to others a larger and more extended one. The reports of the adjudged cases and approved legal treatises are full of the illustrations of applications of this rule to inquire in all such cases, first, as to what was intended in the law by the legislature and in the treaty by the contracting parties.

Mr. MACINNES. My friend, Mr. Wyvell, has the honor to appear for the United States Government, and he has associated with him Mr. Bien. I have a question to put to which I ask an answer, and to which I think this commission is entitled to an answer, and that is as to whether the statement made by my learned friend Mr. Wyvell, when he put forward certain contentions before this International Joint Commission, and then said that if those views were not accepted that this would be not the end of this matter but the beginning of a new controversy. I think we ought to know here whether this is a personal view expressed by my learned friend in support of his argument, or whether it is one which he has authority to make on behalf of the Government of the United States.

Mr. TAWNEY. I speak for myself personally—Mr. Wyvell appears here as the representative of the Government of the United States, as counsel for the Government of the United States, and I presume that the commission will have to assume, as courts assume, that a client represented by counsel has authorized him to represent him unqualifiedly. If so, I take it that the statement made by Mr. Wyvell in respect to the contention which he put forth, that if it was not agreed to it would be the beginning rather than the end of this controversy, he is authorized to make by the Government of the United States, for whom he appears as counsel. I think the commission has the right to assume that he has made a statement of that importance with the consent and advice of the Government that he represents as counsel, and, Mr. MacInnes, you will have to act accordingly.

If there is any qualification that Mr. Wyvell wishes to make to the statement he has made he is at liberty to make it. But without any qualification, under the general rule as to which parties are bound by counsel whom they have employed to represent them, I can not see anything else for us to but to accept the statement as one authorized to be made here by the Government of the United States.

Mr. MACINNES. I had hoped to the contrary, and especially so as Mr. Bien also is appearing for the United States Government and the Reclamation Service, and no such position was taken by him.

Mr. GLENN. We are here to hear the representations made by counsel for the United States and by counsel for Canada, but we are here to discharge our duties impartially, and that we will do.

Mr. MACINNES. Quite so; and I have had the honor to appear before this commission in other cases than this, and I think I can claim that I have always remembered that I was appearing before an international body.

Mr. GLENN. That is quite right.

Mr. SANDS. I would like to make a statement on behalf of the people of the Milk River country. The manner in which we view this is: That if this commission has jurisdiction to construe this treaty, they of course will do it. But on the other hand, if they have no jurisdiction over judicial matters and they are limited to administrative matters only, then they have no jurisdiction and any statements we may make on that point are wholly immaterial. If you have no jurisdiction to construe the treaty, then I have nothing further to say.

Mr. TAWNEY. If there is nothing further to be said on either side I wish, on behalf of the commission, to express the thanks of the

commission for and our appreciation of the very generous response we have received from all interests, Federal, Provincial, State, and private interests, at this hearing. It must be apparent to every one that in this matter the commission has an exceedingly delicate and important problem to deal with. This commission has been created not only for the purpose of settling disputes which may arise between either country or the people of either country, but also for the purpose of preventing disputes between these countries and these peoples, and so far our efforts have been attended with unusual and most gratifying success. There has hitherto been no difference of opinion among the members of the commission, and there has been no feeling of irritation between the people of the two countries who have appeared before the commission. I know that it will be the effort of the commission to consider the record which has been presented to it in this case, regardless of whether we agree with this side or with that, and to work out the best solution we possibly can. As Gov. Glenn has well said, we are not the representatives of either Government; we are constituted judges for both Governments, and each of them has an equal right to expect from us diligence and integrity of purpose in reaching the very best judgment we can in respect to questions of differences that may divide the people on both sides of the line in respect to this or any other matter within our jurisdiction.

I wish again to express my personal thanks and the thanks of the commission for the interest the representatives on both sides have taken in giving to the commission the data and information bearing upon this question which the commission must determine. When it will be determined is a matter as to which I can not speak at the present moment. The first step will be to have this record made out, and in this connection I wish to express the desire that the representatives of either side who have taken away documents or who are to prepare documents will furnish them to the officers at Washington or at Ottawa as soon as possible. The commission will meet at Calais, Me., on the 15th of June, and it is expected that we may have this record complete so that we may determine what part of it shall be printed and what part shall not. When the printed record is ready copies of it will be furnished to representatives on each side of the line.

It is understood that any representatives of the Governments, or of private interests, or of anybody else, who desire to submit a brief on the facts, or the law, or both, can do so at any time within the next 60 days.

In closing, I wish to say that the commission intends to discharge its duty as it sees it under the treaty, irrespective of whether or not its judgment may be the beginning or the end of this controversy.

(The commission then adjourned to meet at Calais, Me., on June 15, proximo.)

(The exhibits herein referred to are on file in the offices of the commission at Washington, D. C., and Ottawa, Canada.)

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